Healthy Living: Perspectives from Adult Women in a Rural Context

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Abstract

The purpose of this study was to explore what healthy living means to adult women living in a rural area of a Canadian province. This study examined the benefits and barriers identified by the participants in relationship to healthy lifestyles, as well as the facilitators they recognized in relation to healthy living. Eight women, aged 40-65, from Prince Edward Island took part in the study. Using a descriptive, qualitative approach, data was collected through in-depth interviews. Interview data were transcribed verbatim and analyzed for common themes. Results indicated that the participant's ideas about healthy living included eating in a healthy way, being physically active, experiencing a personal spirituality, and not having addictions to substances. The participants identified a range of factors that facilitated living a healthy lifestyle including: having balance, having confidence in oneself, being in control, supportive family members and friends, spirituality, and public policy. The participants believed that the benefits of a healthy lifestyle involved alleviating stress, enjoying life, having more energy, and being sick less often. The participants identified a number of barriers to living a healthy lifestyle as well. These include a lack of energy and motivation, stress, a lack of time, conditions in the workplace, the location of the exercise facilities, the size of the community, the cost of food, and the lack of support from family and friends. This research study calls for rethinking the education and teaching strategies used to educate women in the area of healthy living. These strategies should be reframed to address the learner as a whole, thus incorporating the physical, mental, and spiritual aspects of lifestyle choices, with a focus on the physical and socio-cultural environments in which individuals live.

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Chapter One: Introduction

Overview

Chronic diseases, such as heart disease, stroke, cancer, obesity, diabetes, and excess stress, are the leading causes of death in the world, representing 60% of all deaths (World Health Organization, 2009a). Of the 35 million people who died from chronic diseases in 2005, half were under 70 and half were women (World Health Organization, 2009a). In Canada, there were 152,395 deaths due to chronic diseases during January 1, 2011 to December 4, 2011 out of a total population of 34,200,000 (Public Health Agency of Canada, 2011).

According to the Partnership to Fight Chronic Disease (2010), health care costs for people with a chronic condition are five times higher than for those without such a condition. Over 75% of health care expenditures are attributed to chronic diseases that can be prevented or managed (Lott, 2010). The Public Health Agency of Canada (2009) suggests a number of actions individuals and families can take to help prevent or delay the onset of chronic disease, such as (a) improving unhealthy eating patterns, (b) becoming less physicallyinactive, and (c) ceasing smoking. Working to prevent the onset of chronic disease may have significant impacts on the health of Canadians.

Eating healthy foods reduces an individual's risk of obesity, type 2 diabetes, heart disease, certain types of cancer and osteoporosis (Health Canada, 2007). However, less than one-third of the residents of Prince Edward Island reported eating the daily suggested minimum number of fruit and vegetable servings based on the *Eating Well with Canada's Food Guide* recommendations (Health Canada, 2008). In another study, the Canadian Community Health Survey determined in 2007 that only 37.5% of the population in Prince Edward Island, ages twelve and older, included fruits and

vegetables as a daily part of their diet, compared to 43.9% of the population of Canada (Statistics Canada, 2007). These rates were based on a self-report of consumption of five or more fruits and vegetables per day. Clearly, there seems to be a gap between what is recommended and what the actual intake is for Prince Edward Islanders in terms of the consumption of fruits and vegetables.

Physical activity also reduces the risk of chronic disease and allows daily tasks to be completed with less stress, less fatigue, and greater comfort (Public Health Agency of Canada, 2008). In 2007, 51.1% of the residents of Prince Edward Island were inactive, compared to 48.3% of Canadians, where inactivity referred to a lack of any bodily movement produced by skeletal muscles that require energy expenditure, as well as an energy expenditure below 1.5 kcal/kg/day (Statistics Canada, 2007; World Health Organization, 2011b). These rates are based on self-reported data. Again, residents of Prince Edward Island fell above the national average with regard to this risk factor.

And finally, it is widely accepted that smoking is the leading preventable cause of death in Canada (Canadian Cancer Society, 2009). In 2007, the Canadian Community Health Survey determined that Prince Edward Island smoking rates were similar to Canadian rates: 17.1% of Prince Edward Island residents smoked, compared to 17.0% in other jurisdictions in Canada (Statistics Canada, 2007). With regard to this risk factor, residents of Prince Edward Island smoke at approximately the same rate as residents across Canada.

According to the World Health Organization (2005), there are other risk factors for chronic disease; however, they account for a smaller proportion of chronic illnesses. One of these factors was alcohol use. The Canadian Community Health Survey concluded in 2007 that residents of Prince Edward Island were more likely to report

heavier drinking than other Canadians, with 24.7% of the population of Prince Edward Island, aged twelve or older, reporting five or more drinks per occasion, at least twelve times in the past twelve months, compared to 21.9% for the population of Canada (Statistics Canada, 2007). Prince Edward Islanders do report a higher drinking rate more frequently than other Canadians.

Significance of this Study

Health professionals believe that it is important to reduce the death rate due to chronic disease and to improve the lives of individuals who suffer from, or are at risk of, chronic disease. The incidence rates and the health care costs associated with chronic illness are currently increasing rather than decreasing (World Health Organization, 2011a). The Public Health Agency of Canada (2008) has called for a clear understanding of the definition of healthy living in order to promote healthy behaviour in Canadians. Very little is known about the meaning of healthy living from the perspective of rural women. This is the gap addressed in this study as I believe rural women suffer from additional barriers in regards to healthy living than urban women.

Conceptual Framework

This study is framed by a constructivist epistemology and a descriptive, qualitative research approach. Guba and Lincoln (1989) believe that knowledge consists of a series of constructions. Learning occurs when individuals integrate new knowledge with existing knowledge and when the learner is actively engaged in the learning process (Piaget, 1932; Tracey & Morrow, 2006; Youniss & Damon, 1992). Each individual perceives the world differently and actively creates or constructs his or her own meaning from events or experience (Burr, 2003; Lincoln & Guba, 1985).

As people communicate with one another, they construct the world in which they live. That co-constructed reality becomes that person's point of view (Gergen, 2009; Lincoln & Guba, 1985). I come from a constructivist epistemology, and I was interested in using in-depth interviews to explore women's perceptions of healthy living.

I adopted a descriptive qualitative approach in this study, since I was interested in gathering the perceptions and experiences of individuals as these related to healthy living (Sandelowski, 2000). In-depth interviews allowed me to explore these experiences, and the exploration helped me to better understand the meaning of "healthy living" for my participants (Creswell, 2009; Patton, 2002). Using descriptive qualitative research allowed me to stay closer to the data and describe the participants experiences in their own language (Creswell, 2009; Neergaard, Olesen, Andersen, & Sondergaard, 2009; Patton, 2002; Sandelowski, 2000).

I collected data in this study by conducting in-depth face-to-face interviews. This approach allowed me to work with each participant to develop a fuller understanding of the meaning of healthy living (Creswell, 2009; Sandelowski, 2000). I then used Stokol's (1996) social ecological model to frame the analysis of the data.

The purpose of this study was to explore what healthy living means to eight adult women, aged 40-65, from Prince Edward Island. I examined the factors the women identified that helped or hindered them in terms of living healthy lives.

I investigated the following research questions:

1. What perceptions do adult women have regarding the meaning of healthy living?
2. What factors do adult women perceive as facilitating living a healthy lifestyle?

3. What factors do adult women perceive as the benefits of living a healthy lifestyle?
4. What factors do adult women perceive as the barriers to living a healthy lifestyle?

Terminology

To clarify the terminology used throughout this research study, a short list of important terms is defined below.

Behaviour: Behaviour represents the interaction of the individual with his or her environment (Sallis et al., 2006).

Bioecological Systems Theory: The bioecological systems theory identifies five types of nested environmental systems, with interrelations between the systems. These are: (a) microsystem (interrelations between the child and his/her family), (b) mesosystem (interrelations between the child's home, school, and neighbourhood), (c) exosystem (external influences on the child, such as the parents' workplace), (d) macrosystem (interrelations between the child and larger representation of culture and society), and (e) chronosystem (dimension of time in the child's environment) (Bronfenbrenner, 1979).

Constructivism: Constructivism is a philosophy of learning based on the principle that individuals construct their own understanding of the world. Constructivists believe that individuals create their own mental models or schemas, which they use to make sense of their experiences. Learning occurs when mental models are adjusted in order to accommodate new experiences (Patton, 2002).

Chronic disease: Chronic disease is a long-lasting or recurrent disease, including arthritis, asthma, heart and stroke, diabetes, and cancer. The major risk factors for

chronic disease are tobacco, alcohol, high blood pressure (hypertension), physical inactivity, cholesterol, being overweight, and having an unhealthy diet (Public Health Agency of Canada, 2009; Prince Edward Island Department of Health and Wellness, 2010).

Descriptive, qualitative research: Descriptive, qualitative research is a method of enquiry which attempts to understand unique human interaction in a natural setting; to answer the "why", "how", and "what" questions. The purpose is to understand the meaning behind human behaviour; the result is extensive and detailed data (Neergaard et al., 2009; Patton, 2002; Sandelowski, 2000; Sullivan-Bolyai, Bova, & Harper, 2005).

Ecology: Ecology refers to the relationship between people and their environment and the influences of these on one another (Glanz, Rimer, & Viswanath, 2008).

Environmental Influences: The environmental influences include social (e.g. social networks and social support systems), cultural (e.g. language, cuisine, social habits, music, arts), physical (e.g. community environment), economic (e.g. socio-economic status) and personal (e.g. beliefs, attitudes, experience, knowledge) influences (Stokols, 1992; Stokols, Grzywacz, McMaham, & Philiips, 2003).

Health: Health refers to a state of complete physical, social, and mental well-being, and not merely the absence of disease or infirmity (Prince Edward Island Department of Health and Social Services, 2003).

Lifestyle: Lifestyle is a way of living based on identifiable patterns of behaviour which are determined by the interplay between an individual's personal characteristics, social interactions, and socioeconomic and environmental living conditions (World Health Organization, 1998).

Social ecological model: The social ecological model assesses the social environmental influences on behaviour. It takes into consideration the interrelations between individuals and their environments (Bronfenbrenner, 1979; Stephens, 2008; Stokols, 1992). There are multiple levels of influence based on the individual, the intrapersonal, the organization, the community environment, and policy (Stokols, 1992; Stokols, Grzywacz, McMaham, & Philiips, 2003).

Chapter Two: Literature Review

Introduction

In this literature review, I examine the concept of healthy living, both in Canada and more specifically, in Prince Edward Island. I examine the literature related to women's perceptions of living a healthy lifestyle. I then explore the potential synergy between the World Health Organization's (2012) determinants of health, and women's perceptions, the facilitators, benefits and barriers pertaining to healthy living. Then, I discuss an essential component of my conceptual framework: Stokols' social ecological model (1996). I discuss this model for its utility in analyzing my research data which facilitates an understanding of the influences of a wide range of factors on lifestyle, including the individual, interpersonal factors, organization, community environments, and policies (Stokols, 1996; Stokols et al., 2003).

Healthy Living

I use a definition of healthy living and Canada's recommendations for living a healthy life that has been developed by Health Canada (2008) to discuss attitudes and perceptions of healthy living on a national scale. According to Health Canada (2008), healthy living involves implementing health-enhancing behaviours or, in other words, living in healthy ways. Living in healthy ways involves making positive choices about personal health, such as engaging in healthy eating, choosing not to smoke, being physically active, and building a circle of social contacts (Public Health Agency of Canada, 2008).

Health Canada (2008) has recommendations regarding healthy living, such as eating from appropriate food groups and portion sizes. See Table 1 for their recommendations.

Table 1

Recommended Number of Eating Well with Canada's Food Guide Servings per Day for Adult Women Between the Ages of 40-65 (Health Canada, 2008)

Food group	Ages 40-50	Ages 51-65
Vegetables and fruit	7-8	7
Grain products	6-7	6
Milk and alternatives	2	3
Meat and alternatives	2	2

Healthy eating recommendations can vary from person to person, depending on existing health conditions and an individual's needs. For example, individuals with diabetes may need to watch the amount of carbohydrates they eat and those with high blood cholesterol may take into account the amount and type of fat in their foods (Lorig et al., 2006).

In regards to being physically active, researchers at the Public Health Agency of Canada (2011) made recommendations for appropriate exertion levels and duration of physical activity needed in order to live a healthy life. See Table 2 for the Canadian Physical Activity Guidelines for adults (18–64 years), which were developed by the Canadian Society for Exercise Physiology (2011).

Table 2

Canadian Physical Activity Guidelines for Adults (18–64 years) (Public Health Agency of Canada, 2012a)

	Tip	Description
1	Be active at least 2.5 hours per week	(a) Choose a variety of physical activities you enjoy (b) Get into a routine
2	Focus on moderate to vigorous aerobic activity throughout each week, broken into sessions of 10 minutes or more	(a) Limit the time you spend watching TV (b) Move yourself
3	Get stronger by adding activities that target your muscles and bones at least two days per week	(a) Spread your sessions of moderate to vigorous aerobic activity throughout the week. (b) Join a team

Health Canada (2011a) has also made recommendations regarding smoking. They suggest that quitting smoking would be the best thing that individuals could do to improve their health. Health Canada (2011a) found that, if individuals quit smoking, they may start to feel better within 24 hours. Two days later, their risk of a heart attack may decrease.

The final area that Health Canada (2011b) found influenced healthy living pertained to an individual having a circle of social contacts. Social contacts help to create a supportive environment of people who care for and respect the individual.

The World Health Organization (2012) made similar recommendations for healthy living as Health Canada (2008) and the Public Health Agency of Canada (2008).

However, the World Health Organization defined the determinants of health as part of a Health Impact Assessment (2012). Individuals are deemed healthy or not by their circumstances and their environment. The determinants of health include: (a) the social and economic environment, (b) the physical environment, and (c) the person's individual characteristics and behaviours (World Health Organization, 2012).

The World Health Organization (2012) defined the above determinants as well as many other factors that explain why people may or may not be healthy. Included in these are income and social status, education, physical environment, social support networks, genetics, health services, and gender.

Women's perceptions of healthy living.

I was unable to find very much research examining women's perception of healthy living. Paluck, Allerdings, Kealy, and Dorgan (2006) conducted a review of qualitative studies and found women perceived healthy living as involving their physical and mental health. This included emotional problems, stress, exercise, and quitting smoking. The researchers determined that older women believed in a balance of activities that supported their physical and mental health, whereas middle to younger aged women was more concerned with their physical health.

Musgrave, Allen, and Allen (2002) performed a study on adult women of colour and they found very different results pertaining to women's perception of healthy living. These researchers discovered that women associate healthy living with spirituality, where spirituality is defined as "a basic or inherent quality in all humans that involves a belief in something greater than the self and a faith the positively affirms life" (p. 557). They found that women view health and disease (or illness) as holistic (spiritual, moral, physiological, social, psychological); the health and disease comes from God. The

following is an examination of the first aspect of a healthy lifestyle (healthy eating), as defined by the Public Health Agency of Canada (2008).

Women's perceptions of healthy eating.

Research examining women's perceptions of healthy eating found that women classified foods based on the individual's definition for healthy and unhealthy foods (Falk, Sobal, Bisogni, Connors, & Devine, 2001). In their study, Falk, Sobal, Bisogni, Connors, and Devine (2001) discovered that the categories of "healthy" and "unhealthy" helped to simplify the process of selecting foods. Once food was classified, strategies were developed when determining what to consume. Some of these strategies included avoidance (of unhealthy foods), limitation (of unhealthy foods), substitution (of healthy for unhealthy foods), preparation (of healthy foods), and addition (of healthy foods) (p. 429). Women reported using a variety of strategies in order to eat healthy. The type or combination of strategies used differed among the women depending on their personal experiences and cultures. Falk et al. (2001) found that, since their strategies differed, the women's definition of healthy eating differed based on their individual perspective. Seven definitions of healthy eating emerged:

1. Healthy eating is eating low fat
2. Healthy eating is eating natural/unprocessed foods
3. Healthy eating is balanced eating
4. Healthy eating is eating to prevent disease
5. Healthy eating is maintaining nutrient balance
6. Healthy eating is eating to manage an existing disease
7. Healthy eating is eating to control weight (p. 428, 430)

Paquette (2005) found, through meta analysis, that women's perceptions of healthy eating included the following key elements: (a) vegetables and fruits, (b) limited red meats, (c) low levels of fats, salt, and sugar, (d) quality aspects, such as unprocessed and homemade foods, and (e) concepts of balance, variety, and moderation. Paquette (2005) also determined that women's perceptions of healthy eating were heavily influenced by dietary guidance, such as Eating Well with Canada's Food Guide (Health Canada, 2008). Eikenberry and Smith (2004) found similar results and discovered that women perceive healthy eating to include: (a) fruits and vegetables, (b) meats, (c) grains, and (d) food that is low-fat or lean. Falk et al. (2001) found that women's perceptions of healthy eating included: (a) low fats, (b) natural/unprocessed foods, (c) balanced eating, (d) eating to prevent disease, (e) maintaining nutrient balance, (f) eating to manage an existing disease, and (g) eating to control weight. These studies found that women had a number of similar ideas about what healthy eating entails.

Several researchers have also found that women's perceptions of healthy eating are affected by their opinions of their bodies, which is influenced by their environment and culture (Eikenberry & Smith, 2004; McKie, Wood, & Gregory, 1993). Women are bombarded with images of slim, fit women through television, advertising, and the media, resulting in women's beliefs that they also should be slim and fit. The relationship between food and body image is powerful for women (McKie et al., 1993).

Common elements, described by the researchers above, towards women's perception of healthy eating included: (a) eating vegetables and fruits, (b) consuming low levels of fat, (c) choosing natural/unprocessed foods, (d) eating to control or lose weight, and (e) trying to achieve concepts of balance, variety, and moderation. The following is an examination of the second aspect of a healthy lifestyle; physical activity

Women's perceptions about physical activity.

Sherwood and Jeffery (2000) found that women's perceptions of physical activity are related to self-efficacy, exercise history, and physical appearance. Self-efficacy might be one of the strongest predictors of exercise behaviour in the early stages of exercise (Nothwehr, Snetselaar, & Wu, 2006; Sherwood & Jeffery, 2000; Trost, Owen, Bauman, Sallis, & Brown, 2002). Exercise self-efficacy refers to a woman's degree of confidence in her ability to be physically active (Sherwood & Jeffery, 2000). Women with higher levels of self-efficacy tend to enjoy exercising more than those with lower levels. In addition, they tend to exercise more frequently than those with lower levels of self-efficacy (Nothwehr et al., 2006).

Women's perception of physical activity is also related to their exercise history (Allender, Cowburn, & Foster, 2006; Sherwood & Jeffery, 2000). Women cited negative school experiences as one of the reasons for disliking exercise. These negative experiences included boredom, physical discomfort, repetition, short class periods, and a competitive class environment that identified students as ''winners'' and ''losers' were factors contributing to students' dislike of physical education (Allender et al., 2006). In addition, women cited being forced to exercise as a child as another reason for their opinion of physical activity (Sherwood & Jeffery, 2000).

Finally, women's perception of physical activity is related to their physical appearance (Sherwood & Jeffery, 2000). Heavier women tend to dislike exercising and exercised less because they feel embarrassed wearing exercise clothes; they feel other people are watching and judging them (Allender et al., 2006; Sherwood & Jeffery, 2000). More fit women enjoy exercising and more frequently participate in physical activity (Patterson, Moore, Probst, & Shinogle, 2004). These studies found that women

had similar perceptions about physical activity. The following examines the third aspect of a healthy lifestyle: not smoking.

Women's perceptions about smoking.

Researchers discovered that women's perceptions of smoking are not consistent or realistic in regards to the addictive nature of smoking. Jamison and Romer (2001) questioned smokers and found that 62% felt that it was very easy or hard, but doable, to quit. They also determined that women tended to underestimate the risk involved in smoking. However, the Centers for Disease Control and Prevention (2001) found that women possessed an increased awareness of the negative health consequences of regular smoking. Other researchers found that women perceived work, relaxation, drinking coffee, and moods like anxiety and depression, as associations to smoking (Glanz, Sallis, Saelens, & Frank, 2005; Sallis, Owen, & Fisher, 2008). Since it is widely accepted that smoking is the leading preventable cause of death (Canadian Cancer Society, 2009) and Jamison and Romer (2001) found that 62% of women believe quitting smoking is doable, this is an area of healthy living that requires further investigation apart from this study. The final aspect for examination of a healthy lifestyle is building a circle of social contacts.

Women's perceptions about building a circle of social contacts.

Research examining women's perceptions of social support, support from family and friends, and healthy living suggests a relationship between perceived social support and a healthy diet, higher levels of exercise, and reduced substance and alcohol abuse (Adams, Bowden, & Humphrey, 2000; Jackson, 2006). As a woman's perceived social support increases, her diet becomes healthier and her levels of exercise increase

(Jackson, 2006). Thus, healthy living is influenced by this social environmental factor (Public Health Agency of Canada, 2008, World Health Organization, 2012).

Facilitators influencing healthy living.

Researchers have identified numerous facilitators of a healthy lifestyle as income, education, social support, self-efficacy, and healthy public policy for example (Ainsworth, Wilcox, Thompson, Richter, & Henderson, 2003; Eyler, 2003; Fitzgerald & Spaccarotella, 2009; Fleury & Lee, 2006; Glanz et al., 2005; Patterson et al., 2004; Richards, Riner, & Sands, 2008). These facilitators relate to socio-economic status (levels of income and education), healthy eating, physical activity, and not smoking, which are determinants of health and are described in the following section (World Health Organization, 2012).

Socio-economic status.

Socio-economic status, more specifically levels of income and education, are shown to have a considerable effect on changing and maintaining health promoting behaviors (Eyler, 2003; Fleury & Lee, 2006; Patterson et al., 2004; Richards et al., 2008). The World Health Organization (2012) found that the higher the income and social status, the better the health of the individual. In other worlds, the greater the gap between the rich and the poor, the greater the difference in health. A number of other researchers have found a correlation between income levels and healthy eating (Eyler et al., 1998; Fitzgerald & Spaccarotella, 2009; Shepherd et al., 2006). Glanz, Sallis, Saelens, and Frank (2005) found that healthier foods, such as low-fat dairy products and fresh fruits and vegetables, were more easily accessible and affordable to those with higher income levels. Morland, Wing, Diez, Roux, and Poole (2002) determined that the availability of healthier foods depends on the accessibility of particular types of stores in

the community (grocery or health food stores). The communities or neighbourhoods where people had higher income levels tended to have grocery and health food stores available; thus, a higher income level may be a facilitator to healthy eating.

Other researchers have found an association between income levels and physical activity (Fleury & Lee, 2006; Sallis, Bauman, & Pratt, 1998). Fleury and Lee (2006) discovered that adults with higher income levels have higher physical activity levels since they can afford the cost of membership to exercise facilities. Sallis, Bauman, and Pratt (1998) found that those with higher income levels perform more outdoor activities due to the increased number of sidewalks, street lights, parks, and outdoor recreational facilities in their geographical location. Consequently, a higher income level may be a facilitator of increased physical activity.

In regards to the socio-economic factor of level of education, Eyler (2003) did not find a relationship between education levels and healthy eating. Her study found that education levels are not a factor in healthy eating. Wardle, Parmenter, and Waller (2000) agreed with Eyler (2003). They also determined that nutritional knowledge is independent of educational level and occupational category. Sherwood and Jeffery (2000), however, did find an association between higher education levels and increased physical activity. The researchers determined that increased knowledge led to an increased understanding of exercise routines; therefore, education may be a facilitator to increased physical activity.

In regards to the socio-economic factors that affect women smoking, Brownson et al. (1992) determined that the knowledge about the health effects of smoking was lower among older age groups, Caucasian adults, women, individuals with lower

education levels, and current smokers. These researchers also discovered that smokers are less likely than non-smokers to acknowledge the harmful effects of smoking.

Facilitators for healthy eating.

Researchers have also found that women's perceptions of the facilitators of healthy eating related directly to the determinants of health (Eyler et al., 1998; Fitzgerald & Spaccarotella, 2009; Glanz et al., 2005; Hill & Peters, 1998; World Health Organization, 2012). Women are influenced by individual characteristics such as self-efficacy. Several studies have found correlations between self-efficacy and poor dietary profiles (Strachan & Brawley, 2009; White, Cason, Coffee, Mayo, & Kemper, 2010). Women with higher levels of self-efficacy are more likely to eat in a healthier manner (Nothwehr et al., 2006; Satia, Galanko, & Siega-Riz, 2004).

Numerous studies have shown that factors, such as an individual's social network and social support systems, are facilitators to healthy eating (Eyler et al., 1998; Fitzgerald & Spaccarotella, 2009; Shepherd et al., 2006; Wilcox, Castro, King, Housemann, & Brownson, 2000). The World Health Organization (2012) found that the more support an individual has from their friends, families, and communities, the healthier the individual. Other researchers found that women required social support from family and friends in order to change their dietary preferences from unhealthy to healthy. Chang, Baumann, Nitzke, and Brown (2005) found that individuals who had social support for healthy eating also had reduced fat intake; therefore, social support may be considered a facilitator for healthy eating.

Additional studies have shown that the community environment is an additional facilitator of people's dietary habits. Researchers have found that women claim it would be easier for them to eat in a healthy manner if fresh fruits and vegetables were more

accessible in convenience and grocery stores (Glanz et al., 2005; Hill & Peters, 1998; Horowitz, Colson, Hebert, & Lancaster, 2004; Morland, Wing, Diez, Roux, & Poole, 2002; Richards et al., 2008). The placement of food on shelves in stores also has a great influence on shoppers as the higher calorie and fattier foods tend to be placed at eye level and the healthier foods are either higher or lower on the shelves (Glanz et al., 2005). Consequently, accessibility to healthy food is a facilitator to healthy eating.

Fitzgerald and Spaccarotella (2009) found policies that influenced food pricing affected the type of food individuals purchased, since healthy foods tend to be more expensive. Monsivais and Drewnowski (2007) found that the prices of vegetables and fruit had outpaced the rate of inflation, thereby making it more difficult for some people to purchase these staples. As a result of this research, the facilitator to healthy eating would be health public policy.

The above research has shown that individual characteristics (self-efficacy, behaviours, attitudes, knowledge, and socio-economic status), social support networks, community environment (access to healthy foods at grocery or convenience stores), and policy (food pricing) are facilitators of healthy eating (Fitzgerald & Spaccarotella, 2009; Fleury & Lee, 2006; Glanz et al., 2005; Pepin, McMahan, & Swan, 2004; Shepherd et al., 2006; World Health Organization, 2012).

Facilitators for physical activity.

Researchers found that women's perceptions of the facilitators of physical activity are also directly related to the determinants of health and the aspects of (a) individual characteristics, (b) social support networks, (c) organizations, (d) the community environment, and (e) policy issues (Ainsworth et al., 2003; Eyler, 2003; Fleury & Lee, 2006; Nothwehr & Peterson, 2005; Parks, Housemann, & Brownson,

2003; Richards et al., 2008; Sallis et al., 1998; Wilcox et al., 2000). Women's beliefs about physical activity demonstrate influences related to the determinants of health. For example, researchers found strong correlations between women's perception of self-efficacy and their level of physical activity (Ainsworth et al., 2003; Eyler, 2003; Fleury & Lee, 2006). Ainsworth, Wilcox, Thompson, Richter, and Hendersen (2003) found that adults with higher perceptions of self-efficacy are more likely to meet the recommendations for physical activity. Fleury and Lee (2006) discovered similar results related to self-efficacy; adults who had the perception of being in poor health tend to have lower physical activity levels.

Several studies found social support networks are facilitators of women's level of physical activity (Fleury & Lee, 2006; Nothwehr & Peterson, 2005; Parks et al., 2003; Wilcox et al., 2000). Various studies showed that women require social support from family and friends in order to maintain and increase their physical activity levels (Nothwehr & Peterson, 2005; Parks et al., 2003). Fleury and Lee (2006) showed that having an exercise partner helps motivate people to exercise. Walking with family or friends helps to increase the amount of physical activity performed and also enables individuals to spend more time with family and friends (Nothwehr & Peterson, 2005; Parks et al., 2003; Wilcox et al., 2000). As a result, social support is considered a facilitator for physical activity for the participants.

Studies showed that factors in the community environment, such as the workplace, religious services, or community groups, could also positively affect women's level of physical activity (Eyler, 2003; Fleury & Lee, 2006; Richards et al., 2008; Sallis et al., 1998). Sallis et al. (1998) suggested that workplaces assist employees by subsidizing health memberships for employees as an incentive to stay fit and healthy.

Richards, Riner, and Sands (2008) concluded that those who are inactive at work tend to be inactive at home. Some studies have found that women who attended religious services and/or belonged to community groups are more likely to engage in physical activity (Eyler, 2003; Fleury & Lee, 2006). Consequently, the community environment is a facilitator to physical activity.

Sallis et al. (1998) found policy to be another facilitator for increasing levels of physical activity. These researchers suggested that policies be created to offer incentive programs for commuters to use their cars less and car-pool, reduce insurance rates for those individuals who were physically fit, change building codes to mandate that shopping be within 10 minutes of all houses, require showers and change rooms in workplaces, and provide more funding for walking/biking trails. The researchers felt that if these policies were created, levels of physical activity would increase. Women's perceptions of the facilitators to increasing levels of physical activity include factors directly related to the determinants of health: individual (self-efficacy), social support network, organizations, community environment (workplace, religious services, and community groups), and policy (incentive programs for commuters).

Facilitators for non-smoking.

Researchers found that women's perceptions of smoking also relate directly to the determinants of health (Glanz et al., 2005; Sallis et al., 2008; World Health Organization, 2012). At an individual level, addiction to nicotine and genetic factors contribute to the individual's persistence of smoking. This addiction in turn causes associations of smoking with work, relaxation, drinking coffee, and moods like anxiety and depression. Household smoking restrictions of parents and peers contribute to the individual's smoking habits. At the organizational level, reduction in smoking has been

found due to workplace cessation programs. Similarly, at the community environment level, reduction in smoking has been seen due to community participation programs that emphasize smoking cessation. At the policy level, promotion of smoke-free environments, limiting access, and increasing tobacco prices through excise tax has been influential in smoking cessation (Glanz et al., 2005; Sallis et al., 2008). Women's perceptions of the facilitators that influence healthy living (socio-economic status, healthy eating, physical activity, and lack of smoking) are directly related to the determinants of health (Ainsworth et al., 2003; Eyler, 2003; Fleury & Lee, 2006; Glanz et al., 2005; Richards et al., 2008).

Women's perception of the benefits of living a healthy life.

Research has shown that women have many diverse perceptions of the benefits to living a healthy life and these benefits are all directly related to the determinants of health (Fleury & Lee; 2006; Chan, Ryan, & Tudor-Locke, 2004; Lopez-Azpiazu, Martinez-Gonzalez, Kearney, Gibney, & Martinez, 1999; Shepherd et al., 2006; World Health Organization, 2012). The benefits that healthy eating and physical activity bring to a healthy lifestyle are explored in the following two sections.

Benefits of healthy eating.

The most common aspects of women's perceptions of the benefits of healthy eating described by the researchers were: (a) better health, (b) prevention of disease, (c) weight reduction, and (d) living longer (Eikenberry & Smith, 2004; Lopez-Azpiazu et al., 1999; Shepherd et al., 2006; White et al., 2010). Lopez-Azpiazu, Martinez-Gonzalez, Kearney, Gibney, and Martinez (1999) showed that women perceive the benefits of healthy eating to include disease prevention, staying healthy, having a good quality of life, controlling weight, being fit, living longer, and having energy. Eikenberry and

Smith (2004) found the benefits of healthy eating include maintaining health, feeling good/better, living longer, treating and preventing disease, losing weight, and being strong. White, Cason, Coffee, Mayo, and Kemper (2010) discovered results similar to Eikenberry and Smith (2004); however, they also found the additional benefits of higher self-esteem and more energy.

Benefits of physical activity.

The common themes found by researchers pertaining to women's perceptions of the benefits of physical activity include: (a) decreased stress, (b) better physical stamina, (c) increased social interaction, (d) weight loss, and (e) improved health (Chan et al., 2004; Fleury & Lee; 2006). Fleury and Lee (2006) found that adults who engage more frequently in physical activity experience decreased stress, better physical stamina, and increased social interaction. They also determined that adults who perceived physical activity to be beneficial and saw few barriers, were more likely to exercise. Chan, Ryan, and Tudor-Locke (2004) found that increased physical activity leads to weight loss, improved health, and subsequently a decreased risk of contracting a chronic illness.

Cannioto (2010) found a correlation between body mass index (BMI) rates and physical activity levels, and physical activity enjoyment and importance. As physical activity enjoyment and importance increase, BMI decreases and physical activity behaviours increases. No correlations were found between physical activity intentions and BMI, and physical activity intentions and actual physical activity levels.

The Prince Edward Island Department of Health and Wellness (2010) found that the benefits of physical activity include improved circulation, and improved weight control, blood sugar levels, blood pressure and cholesterol levels. Physical activity also helps people develop muscle strength, endurance, and flexibility. It increases energy,

improves sleeping habits, helps manage stress, prevents constipation, and improves a person's ability to participate in family and social outings.

Women's perception of the barriers to living a healthy life.

Women's perceptions of the barriers to healthy living are directly related to the determinants of health (World Health Organization, 2012). Women are affected primarily by the social and economic environment, the physical environment, and the women's individual characteristics and behaviours (World Health Organization, 2012). These factors will be discussed in relation to women's perceptions of the barriers to having a healthy lifestyle as it relates to socio-economic status, healthy eating, and physical activity.

Barriers associated with socio-economic status.

Socio-economic status, specifically (a) lower income levels, (b) lower levels of education, and (c) marital status, have been shown to have a considerable affect on changing and maintaining health promoting behaviours (Eyler, 2003; Fleury & Lee, 2006; Patterson et al., 2004; Richards et al., 2008). A number of researchers have found a correlation between income levels and healthy eating (Eyler et al., 1998; Fitzgerald & Spaccarotella, 2009; Shepherd et al., 2006). Participants in these various studies believed that fast food was "cheap", that healthy foods typically cost more money, and that healthy food were not easily accessible (Morland et al., 2002). Availability of healthier foods depends on the accessibility of particular types of stores in the community, such as a convenience, grocery, or health food stores (Horowitz et al., 2004). The communities or neighbourhoods where people have lower income levels tend to have more convenience stores, fewer grocery stores, and more fast food restaurants (Morland et al.,

2002). People believe that healthier foods typically cost more money (Glanz et al., 2005; Hill & Peters, 1998).

Other researchers have found an association between income levels and physical activity (Fitzgerald & Spaccarotella, 2009; Fleury & Lee, 2006; Sallis et al., 1998). Fleury and Lee (2006) discovered that adults with lower income are more inclined to walk or cycle to businesses and shopping areas. If a neighbourhood feels unsafe, individuals typically engage less in outdoor physical activity. Ball, Salmon, Giles-Corti, and Crawford (2006) found that women with lower income levels typically cannot afford to attend a local gym. Additionally, they tend to have less time to participate in physical activity due to inflexible work hours.

Ball et al. (2006) found that women who have lower levels of education tend to experience time-management difficulties in organizing their hectic lives to allow for physical activity. The World Health Organization (2012) discovered that individuals with lower levels of education tend to have poor health, more stress, and lower self-confidence. Ramsey and Glenn (2002) found that unmarried women were more likely to have poorer health and experience a higher weight gain than married women. Consequently, women may perceive the socioeconomic factors of income, education, and marital status as barriers to having a healthy lifestyle.

Barriers to healthy eating.

Several studies that focused on the barriers to healthy eating showed that some barriers may be attributed to individual characteristics, such as knowledge, behaviour, and attitudes. Studies have shown that the lack of nutrition knowledge is a barrier to healthy eating (Fitzgerald & Spaccarotella, 2009; Shepherd et al., 2006; Wardle, Parmenter, & Waller, 2000). People with a lack of nutrition knowledge struggle when

trying to choose items that are part of a healthy diet (Hughes, Bennett, & Hetherington, 2004; Shepherd et al., 2006; Wardle et al., 2000). In addition, people who lack cooking skills often experience difficulties when determining what to cook and how to prepare a meal. Hughes, Bennett, and Hetherington (2004) found that individuals with better cooking skills have a healthier diet and better physical health. If an individual knows how to cook, she/he is more likely able to make nutritious foods taste pleasing. Many people often perceive fast food diets and less nutritious foods as "delicious", and healthy foods less tasty (Fitzgerald & Spaccarotella, 2009; Shepherd et al., 2006). Another barrier associated with healthy eating focuses on an individual's ability to apply his or her nutrition knowledge when making healthy food choices. Gottschall-Pass, Reyno, MacLellan, and Spidel (2007) found that, although adults tend to have a good general knowledge of nutrition, they lack more specific knowledge about healthy food choices and how their choices affect their risk of disease. Similarly, other studies discovered that, although nutrition knowledge has increased, people have not learned how to apply it (Pepin et al., 2004; Shepherd et al., 2006).

Lack of motivation is another individual barrier to healthy eating. Goodrick and Foreyt (1991) discovered that some adults possess a lack of motivation to eat well. Pepin, McMahan, and Swan (2004) discovered that some adults are aware that unhealthy foods cause illness, yet they report eating out frequently at fast-food restaurants. Hermstad, Swan, Kegler, Barnette, and Glanz (2010) found that women who frequently eat at fast-food restaurants and women who frequently grocery shop tend to have high fat foods in their homes. These actions could be due to a lack of motivation. Fitzgerald and Spaccarotella (2009) also found that taste preferences affect one's ability to have a healthy diet. If a person does not like the taste of a specific food, he/she will not eat it.

A few studies identified barriers associated with interpersonal factors (Fitzgerald & Spaccarotella, 2009; Glanz et al., 2005; Shepherd et al., 2006). Shepherd et al. (2006) found that individuals are affected by the people with whom they live. Cooking can often be challenging for those who live with children who have particular taste preferences or the elderly who are on a restricted diet (Fitzgerald & Spaccarotella, 2009; Shepherd et al., 2006). Fitzgerald and Spaccarotella (2009) found that the culture of the family and the community influences what an individual eats. If an individual is living in a farming community, for example where the staples are meat and potatoes, it might not be generally accepted to serve a healthy vegetable stir-fry (Fitzgerald & Spaccarotella, 2009). Glanz et al. (2005) discovered that individuals are also affected by the primary food shopper and preparer. If this person chooses not to purchase healthy foods, the others in the household often have no choice but to eat unhealthy foods (Glanz et al., 2005; Shepherd et al., 2006).

Studies have also shown that families who have less family meal time together often have lower nutritional intake in their meals (Gillman et al., 2000; Neumark-Sztainer, Story, Resnick, & Blum, 1996). Television viewing or screen time on the computer is also an issue because it takes away from family time, and the individuals viewing the television are being subjected to food advertisements, which might have a negative influence on them (Fitzgerald & Spaccarotella, 2009).

Workplace barriers can also influence healthy eating habits (Fitzgerald & Spaccarotella, 2009; Shepherd et al., 2006). Many workplaces do not have cafeterias; however, those that do are not necessarily offering healthy alternatives (Fitzgerald & Spaccarotella, 2009). Shepherd et al. (2006) found that vending machines are present in many kitchens in the workplace, though they typically contain unhealthy snacks. In

addition, the closest restaurants to workplaces are usually fast-food locations (Fitzgerald & Spaccarotella, 2009; Shepherd et al., 2006).

Numerous studies that are focused on the community environment found barriers surrounding people's dietary habits and the type of stores found within their community (Glanz et al., 2005; Hill & Peters, 1998; Horowitz et al., 2004; Morland et al., 2002; Richards et al., 2008). For women living in rural areas, convenience stores are usually more easily accessible; however, the fruits and vegetables are more expensive and less fresh than at a grocery store in an urban area which deters the women from purchasing them (Glanz et al., 2005; Morland et al., 2002). In regards to grocery stores, the placement of food on shelves in stores proved to be a barrier. The higher calorie and fattier foods tended to be placed at eye level and the healthier foods were either higher or lower on the shelf (Glanz et al., 2005).

Characteristics related to restaurants can also influence healthy eating habits. Location, availability, and size of portions found within are barriers to eating in restaurants in the community environment (Glanz et al., 2005; Hill & Peters, 1998). In recent years, it has become increasingly popular to eat out. Fast-food restaurants provide a convenient opportunity to consume a meal that contains a large quantity of high fat and high calorie foods (Hill & Peters, 1998). Fast-food restaurants are also easily accessible. Many offer drive-through windows open 24 hours a day and there is often a plethora of fast-food restaurants from which to choose. In addition, these foods are higher in fat, contain less fibre, and are larger in portion size than those foods prepared at home (Glanz et al., 2005).

Barriers to healthy eating can also be found at the policy level. Fitzgerald and Spaccarotella (2009) claim policies that influence food pricing affect the type of food

individuals may purchase since healthy foods tend to be more expensive. Monsivais and Drewnowski (2007) found that the prices of vegetables and fruit had outpaced the rate of inflation.

The research described above has shown that individual characteristics (socio-economic status, self-efficacy, self-perceived health, taste preferences, lack of motivation and time, and nutrition knowledge), social support network, organization (workplace provisions), community environment (community culture and access to grocery stores, convenience stores, and restaurants), and policy (food pricing and rate of inflation) are barriers that women perceived to healthy eating.

Barriers to physical activity.

Similar to healthy eating, barriers to physical activity that have been identified may be directly related to the determinants of health and the aspects of social and economic environment, the physical environment, and the women's individual characteristics and behaviours (World Health Organization, 2012). A number of studies that focused on the barriers to physical activity determined that an individual's characteristics, such as knowledge and attitude, may affect his or her levels of fitness (Ainsworth et al., 2003; Crombie et al., 2004; Eyler, 2003; Fleury & Lee, 2006). Fleury and Lee (2006) concluded that knowledge and attitudes are important when starting and maintaining a physical activity program. Crombie et al. (2004) discovered that, even though some adults are knowledgeable about the health and personal benefits of physical activity, they still maintain low levels of physical activity. Other barriers include a lack of time, a lack of motivation, a lack of willpower, perceived laziness, and the perception that they already exercise enough (Ainsworth et al., 2003; Wilcox et al., 2000).

Additional barriers to physical activity are related to the community environment, including a lack of available recreational programs, the remoteness of the community, and the lack of recreational facilities (Eyler et al., 1998; Eyler, 2003; Fleury & Lee, 2006; Richards et al., 2008). Even though the lack of recreational facilities was a barrier to physical activity, Sallis et al. (1998) found that even if women live near recreational facilities, they often will not attend. Common factors that often deter women from joining a recreational facility include the idea that people who work there are too thin and young (thereby drawing extra attention to themselves), and the programs are often designed for those who are already active (thereby making them feel excluded).

Wilcox et al. (2000) found that the lack of physically active role models may deter women from exercising. Other studies discovered that a wide variety of external factors can affect a person's likelihood to engage in physical activity: high traffic area, poor street lighting, lack of sidewalks, unattended dogs, high crime area, few places within walking distance (grocery stores and businesses), and few places to exercise (Eyler, 2003; Eyler et al., 1998; Richards et al., 2008).

Barriers to physical activity were also discovered at the policy level. Sallis et al. (1998) suggested that policies be created to offer incentive programs for commuters to use their cars less and car-pool, reduce insurance rates for individuals who are physically fit, change building codes to mandate that shopping be within 10 minutes of all houses, require showers and change room in workplaces, and provide more funding for walking/biking trails. Without these types of policies, physical activity levels may not increase.

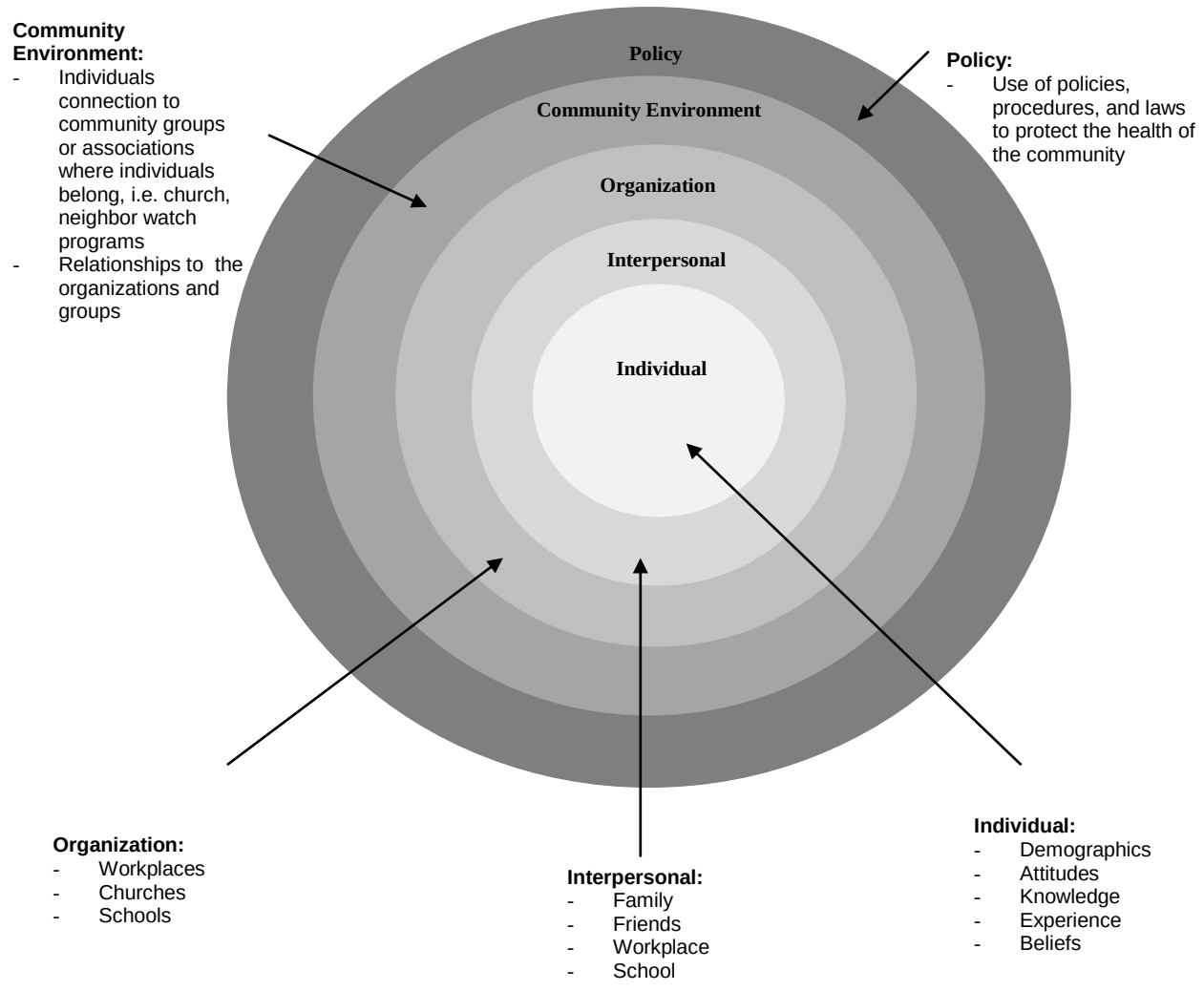
Common factors emerged from the research studies cited above that relate to women's perception of the barriers encountered in performing physical activity. These include: (a) knowledge, (b) attitudes, (c) lack of time, (d) lack of motivation, (e) lack of willpower, (f) belief women perform enough exercise, (g) lack of energy, (h) lack of available recreational facilities and programs, (i) high traffic, (j) poor street lighting, (k) lack of sidewalks, (l) unattended dogs, (m) high crime, and (n) policy.

Social Ecological Model

Healthy living may be represented using levels of influence such as psychological, social, and cultural determinants which are specific to an environment (Falk et al., 2001; Gustafsson & Sidenvall, 2002; Paquette, 2005; Saltonstall, 1993). Bronfenbrenner (1979) created a framework that explored social influences on behaviour and took into consideration the interrelations between individuals and their environments.

Stokols' (1996) social ecological model was based on Bronfenbrenner's framework. Bronfenbrenner's model focused solely on the social environmental influences, whereas Stokol's model focused on changing social, environmental and economic conditions (Stokols, 1996; Stokols et al., 2003). Stokols' model is outlined in Figure 1.

Figure 1 Social Ecological Model (Stokols, 1996; Stokols et al., 2003)



Stokols' model has four basic assumptions. First, health behaviour can be influenced by physical and social environments, as well as personal attributes. Second, environments are multi-dimensional (physical vs. social, objective vs. subjective, and proximal vs. distal). Third, human-environment interactions occur at varying levels of influence, such as individuals, families, cultures, and populations. Fourth, people influence their settings and the result influences their behaviour. It is a reciprocal

relationship (Glanz et al., 2008; Stokols, 1996; Stokols et al., 2003). Stokols' assumptions are important to my study because they highlight several levels of direct and indirect influences on an individual on lifestyle, behaviour choices, and health (Glanz et al., 2008).

As shown in Figure 1, there are five levels of environmental influences on healthy living: (a) individual, (b) interpersonal, (c) organization, (d) community environment, and (e) policy (Stokols, 1996; Stokols et al., 2003). The first level of social environmental influence, the individual, refers to a person's individual characteristics, attitudes, knowledge, experience, and beliefs. This includes the developmental history of a person (Stokols, 1996; Stokols et al., 2003). In terms of healthy living, an individual could increase his/her knowledge of healthy living by subscribing to healthy living tips delivered via email or by picking up free healthy living magazines from the pharmacist (Patterson et al., 2004; Tessaro et al, 2006).

The second level of environmental influence, interpersonal, includes factors such as an individual's social network and social support systems. This includes an individual's relationship to family members and friends (Stokols, 1996; Stokols et al., 2003). Individuals could promote healthy living in their homes by suggesting a family walk after supper or swapping recipes with colleagues, friends, or family members (Atkinson, Billing, Desmond, Gold, & Tournas-Hardt, 2007; Brug, 2008; Eyler, 2003, Patterson et al., 2004).

Organization, the third level of environmental influence, incorporates organizational characteristics that could be used to support behavioural change associated with healthy living. These include characteristics found in the workplace and church (Stokols, 1996; Stokols et al., 2003). For example, healthy living could be

promoted at work by starting a wellness program or by promoting healthy eating in workplace cafeterias (Prince Edward Island Department of Health and Social Services, 2003).

The fourth level of environmental influence, community environment, includes relationships with organizations and institutions. An individual is connected to community groups or associations, such as the local church or neighbourhood watch programs (Richards et al., 2008; Stokols, 1996; Stokols et al., 2003). With respect to healthy eating, the community environment could be supportive by making quality fresh fruits and vegetables available at lower prices, as well as building more parks and green spaces in order to promote physical activity (Glanz et al., 2005; Hill & Peters, 1998; Prince Edward Island Department of Health and Social Services, 2003; Richards et al., 2008).

The last level, policy, is comprised of the local, provincial (or territorial), and national law and policy. This includes policies, procedures, and laws to protect the health of the community (Stokols, 1996; Stokols et al., 2003). The government could build healthy public policy to incorporate concepts of healthy living, or develop a partnership with departments of education to promote healthy living education (Prince Edward Island Department of Health and Social Services, 2003).

Stokols' social ecological model focuses on the psychological, social, and cultural influences on an individual's behaviour as it relates to healthy living (Stokols, 1996; Stokols et al., 2003). As a result, the model describes how people could increase control over their own determinants of health.

There is a gap in the literature addressing all aspects of women's perceptions of healthy lifestyles. Most of the current research tends to focus on healthy eating, physical

activity, and a lack of smoking, but does not address other issues such as alcohol and spirituality. Note that Stokols' socio-ecological model provided the framework for the analysis of this study.

Elements of Research

I next turn my attention to the methodological conceptual framework that underpinned my study. To conduct this research, I chose to use a descriptive, qualitative approach because it describes individuals' perceptions and their experiences of the world. Qualitative approaches answer the "why", "how", and "what" questions (Neergaard et al., 2009; Sandelowski, 2000; Sullivan-Bolyai et al., 2005). Sandelowski (2000) described descriptive, qualitative research as a method by which results can be interpreted in layperson's terms. Sandelowski (2000) characterized qualitative description as being composed of a combination of sampling, data collection, analysis, and outcome measures (p. 337). Sandelowski (2000) defined sampling as purposeful with maximum variation being important. Data collection, on the other hand, focuses on open-ended interviews with individuals or focus groups, as well as the observation of specific occurrences and the review of applicable documentation. Data are analyzed using modifiable code systems. Since the purpose of qualitative description is to stay close to the data, the findings presented are descriptions of the data.

Summary

The major focus of this literature review was to review previous studies and conceptual frameworks that relate to healthy living, and to describe the descriptive, qualitative approach that I utilized. I also examined Stokols' social ecological model and the levels of: (a) individual characteristics, (b) interpersonal connections, (c) organizations, (d) the community environment, and (e) policy issues. I made a number

of connections between women's perceptions of healthy living, as well as the benefits and barriers that women perceive as reported in the existing literature.

In the following chapter, Methods, I present the descriptive, qualitative approach that I took in this research study. I provide information on how I selected the participants, how the data were collected and analyzed, and how I addressed ethical issues throughout the study.

Chapter Three: Methods

Research Design

The purpose of this study was to explore what healthy living means to eight adult women, aged 40-65, from Prince Edward Island. How the participants were selected, as well as how the data were collected, is outlined in this chapter. Data analysis, data management strategies, and verification of the data are also described. Special attention is given to my role as researcher, my background and interests, as well as my biases and expectations.

A qualitative descriptive approach informed by constructivism was used in this thesis (Lincoln & Guba, 1985); Sandelowski, 2000). I chose this approach because I wanted to explore women's perceptions of healthy living experiences in order to describe their viewpoints on healthy living. I believe that reality is based upon a person's point of view, and therefore, the constructivist framework was appropriate; each individual perceives the world differently and actively creates and constructs his or her own meaning from events and experience (Burr, 2003; Lincoln & Guba, 1985). A qualitative descriptive research approach supported the development of in-depth interviews as a data collection method in order to draw out the participants' perceptions and experiences (Neergaard et al., 2009; Sandelowski, 2000; Sullivan-Bolyai et al., 2005).

Research Site and Population Selection

The participants in this study were eight adult women, between the ages of 40 and 65, residing in eastern Prince Edward Island. If more than eight participants volunteered, I would have accepted the first eight eligible volunteers. However, this

issue did not arise. The rationale for accepting only eight participants is due to time constraints.

Interested participants were asked to contact me by telephone through a recruitment advertisement, which was posted in the local Montague newspaper, *The Eastern Graphic*, and on the bulletin boards at the Montague Sobey's and Superstore (Appendix A). When a potential participant contacted me, I read the Participant Information Letter over the telephone (Appendix B). If the individual verbally accepted the invitation, I scheduled an appointment for our interview. The rationale for recruiting participants in Montague (Eastern Prince Edward Island) is due to my physical location in the province being on the Eastern side. No honorarium was given to the participants.

The Eastern Graphic advertisement yielded me two participants. The first woman was from south-eastern Prince Edward Island and we met at a location of her choice, the Down East Mall in Montague. The second woman was from north-eastern Prince Edward Island. She requested that I come to her home for the interview.

I attempted to have maximum variation among participants related to their demographics in order to study varying views of women through a broad range of information-rich cases (Lincoln & Guba, 1985; Sandelowski, 2000). Due to the fact that only two participants responded to my advertisement, I found the remaining six participants through snowball sampling (Patton, 2002). The first two participants identified other women who might be interested in participating in this study and these women identified other possible participants. Once the initial contact was made and the person showed interest in this study, I telephoned her and read the Participant Information Letter over the telephone. If the individual verbally accepted the invitation,

I scheduled an appointment for our interview. The interviews with the final six participants were held in their homes.

Data Collection

I used a constructivist, qualitative research approach to underpin my data collection (Lincoln & Guba, 1985; Sandelowski, 2000). I collected data by conducting in-depth interviews and by asking participants to fill in a short demographic survey. The in-depth interview was a useful technique which gave me an opportunity to listen to each participant's story, from her perspective, experience, and language (Hesse-Biber & Leavy, 2011; Patton, 2002). The demographic survey allowed me to place the participants' experience into context as it described the social and economic conditions of their communities (Hesse-Biber & Leavy, 2011) (Appendix C). The demographic survey allowed me to collect information regarding education level, living arrangements, size of community, income level, and community services. It took approximately five minutes to complete. The interview guide and the demographic survey were pre-tested with three individuals similar to the participants, in order to determine the clarity of the questions. The individuals involved did not request that any changes be made to the survey or the interview guide.

I developed the interview guide based on the social ecological model. The questions specifically related to the various levels of influences on healthy living behaviour. The probes that were used to prompt the participants during the interview process were also based on the social ecological model (Stokols, 1996; Stokols et al., 2003)

Prior to the start of the interview, I reviewed the Participant Information Letter and the Informed Consent Form with each participant. The interview began after the participant understood and signed the Informed Consent Form (Appendix D).

Each interview took approximately sixty minutes. An interview guide was followed which listed the questions to be explored during the interview (Hesse-Biber & Leavy, 2011; Patton, 2002) (Appendix E). The final question in the interview guide asked participants to rate their health in relation to other people their age. A nominal rating scale was used, where the levels were defined as excellent, very good, good, fair, and poor. The questions and interview guide were developed based on a number of preexisting surveys, focus-group questions, and interview guides that were found during the literature review (Bull, Eakin, Reeves, & Riley, 2006; Glanz et al., 2005; Nothwehr & Peterson, 2005; Richards et al., 2008). The authors of these items were contacted and permission was requested to view their material. Upon review of this material, the authors were contacted a second time and permission was requested to use sections of their instruments in order to create these research questions and interview guide. All of the researchers contacted granted permission for use via email. All interviews were audio-recorded and transcribed.

Researcher's journal.

Throughout this study, I wrote about my learning process, new ideas, emotions, and thoughts that came to mind in a journal. I also noted observations that arose during the interview process. Included in each entry were the date, time, and location of the observation. This level of detail is important as nothing should be left for future recall (Patton, 2002). The entries in my journal became part of the data of the study. I

examined my journal on a regular basis to review my notes and to reflect on my own observations.

Data Management Strategies

All data collected through my interviews were converted to electronic format and password-protected. I saved the electronic data on both a USB stick and a CD ROM. When I was not analyzing the data, they were stored in a fire proof locked box in my home in Belfast, Prince Edward Island. No data were stored on computer hard drives.

The data collected from the interviews, field notes, and demographic surveys were transcribed by the researcher using Microsoft Word; participants' names were replaced with pseudonyms. I also chose not to include participants' community of residence to ensure that individuals could not be identified. There was one copy of the master list on the USB stick and CD ROM, which mapped each participant's name to her pseudonym. Three copies of the transcription were printed: two for myself (one copy for safekeeping and another to be used for analysis purposes) and the third to be sent to the participant for review.

Data Analysis

I utilized Stokols' social ecological model to develop a preliminary code list (Stokols, 1996; Stokols et al., 2003). As previously discussed, his model defines five levels of social environments that influence healthy living: (a) individual, (b) interpersonal, (c) organization, (d) community environment, and (e) policy (Stokols, 1996; Stokols et al., 2003). Each level contains a number of factors that are associated with how an individual may be either positively or negatively influenced in their ability to live a healthy life. These factors, which became the codes that I used to deductively analyze my data, were previously defined during my literature review (Glanz et al.,

2005; Nothwehr & Peterson, 2005; Stokols, 1996; Stokols et al., 2003; Wilcox et al., 2000). Table 3 outlines the complete listing of Stokols' social ecological codes.

Table 3

Existing Social Ecological Model Codes (Glanz et al., 2008; Nothwehr & Peterson, 2005; Stokols, 1996; Stokols et al., 2003; Wilcox et al., 2000)

Theme	Codes
Individual (intrapersonal)	Health problems
	Self-consciousness
	Tired
	Time
	Lack of energy
	Family history
Interpersonal	Social support from family and friends
	Care giving duties
Organization	Workplace
	Church
Community environment	Location of restaurants
	Availability of healthy choices and portion size in restaurants
	Lack of available recreational programs
	Remoteness of community
	Lack of recreational facilities
Policy	Health care policies
	Public recreation investments
	Cost of food

To analyze the data deductively, I read and reread each transcript, highlighting previously defined (Stokol's) codes as they were encountered. The codes were colour-coded, based on each level of influence. Once the transcripts were highlighted, I transferred the data into Microsoft Excel. I wrote Stokols' codes across the top of the spreadsheet (along the x-axis) and the participants' pseudonyms down the side (along the y-axis). I entered the quote from a participant's transcript into the cell and the entire paragraph from the transcript beside the participant's pseudonym. This process ensured a data audit trail since I could map the code directly back to the exact location in the correct transcript.

In a constructivist approach to research, inductive data analysis may also be employed (Lincoln & Guba, 1985). Lincoln and Guba (1985) suggest that analysis takes place both during and after the data collection. Inductive analysis involves discovering patterns or themes in the data (Patton, 2002); in other words, the findings emerge out of the data. I read and reread the transcripts again and highlighted passages using a different colour that related to one of the five levels of Stokols' social ecological model: (a) individual, (b) interpersonal, (c) organization, (d) community environment, and (e) policy (Stokols, 1996; Stokols et al., 2003). The passages contained new information not previously defined during the deductive analysis. Similar patterns were then combined into a number of new codes, such as sleep and self-management. Table 4 contains the complete listing of the new codes.

Upon completion of the analysis, I realized that I required one additional piece of information from the participants. I telephoned the participants and asked them if they smoked.

Table 4

New Codes which emerged during Analysis

Influence/theme	Codes
Individual (intrapersonal)	Emotionally stable
	Enjoying life
	Illness
	Control
	Inner strength
	Sleep
	Holistic
	Spirituality
	Peace
	Stress
	Balance
	Self-management
	Living a longer life
	Refusal to change
	Motivation
	Energy
Organization	Media
Community Environment	Weather
Policy	Environment policy
	Health care policy

Researcher's Role

As an employee of Health Prince Edward Island and a person who suffered from an eating disorder at a very young age, I have always had a particular interest in healthy living. Due to my previous eating disorder, I had become extremely sensitive to types and quantities of food consumed. Perceiving the environment around me, and not being judgmental of others, has made my research biased. It has been difficult for me to control; however, I am currently aware of the fact that I am still judgmental of others. It is something I am trying to change and turn into a positive experience. I learned to consider very carefully how I approach other people in regards to their health issues.

I also have a strong curiosity about authentic facts and information behind nutrition and exercise and I have a desire to educate and help others in regards to healthy eating and physical activity. I ensured that all participants were treated ethically throughout this qualitative study. Additionally, I worked on building a relationship with them, originally over the telephone, and then through the interview, so that they trusted me.

Trustworthiness

The trustworthiness of the data refers to the evaluation of the quality of the data. Lincoln and Guba (1985) defined trustworthiness as the fact that the data or information in this research study is "worth paying attention to" (p. 296). Trustworthiness was ensured by applying four principles: (a) credibility, (b) transferability, (c) confirmability, and (d) dependability.

Credibility involves confirming that the results are believable or credible from the perspective of the participant (Patton, 2002). Lincoln and Guba (1985) suggested a number of strategies for ensuring credibility including: triangulation, peer review, and

member checking. Credibility in this study was ensured through member checking. Each participant reviewed and approved her interview transcript to ensure that the raw data gathered from the interview was correct, in terms of the opinions and beliefs that the participants expressed (Patton, 2002). A copy of the transcription from each interview was mailed to the participant for her review, along with a transcript release form, in order to obtain her approval (Appendix F). A self-addressed envelope was included if participants wanted to make changes to ensure that her words were interpreted correctly. The participant mailed back an edited copy to me and I made necessary modifications. If changes were requested, an updated copy was mailed back to the participant for final approval. No substantive changes were requested.

Transferability refers to the degree to which the results of the research can be generalized or transferred to other environments (Lincoln & Guba, 1985). A full description has been provided of the study design, methods, and discussion of the results so that readers may make their own decisions about whether the findings of this study are transferable to their own context (Morse & Field, 1995).

Confirmability refers to the degree to which the results could be confirmed or corroborated by other researchers, as opposed to the data being the result of bias or motivation of the researcher. This was ensured by checking and rechecking the results, in addition to discussions with my thesis supervisors. Confirmability of this research was also enhanced by producing an audit trail consisting of the original transcripts, data analysis documentation, field journal, and any comments provided from the participants as a result of the member checking (Morse & Field, 1995; Research Methods Knowledge Base, 2006). The information pertaining to the participants was disclosed at

a summary level in the findings and interpretation sections; no individuals were identified.

The fourth principle of data trustworthiness is dependability, which ensures that the results are repeatable. Developing an audit trial allowed me to ensure that the findings of this study would be maintained over time (Morse & Field, 1995; Research Methods Knowledge Base, 2006).

The University of Prince Edward Island Research Ethics Board gave ethical approval for this research study. Prior to the start of the interviews, the participants reviewed the Participant Information Letter and the Informed Consent Form. The interview began when the participant understood and signed the Informed Consent Form. Participation was voluntary and the results were confidential and anonymous through the use of pseudonyms.

Throughout this chapter, I have described the research design and the methods adopted to conduct this research. Descriptions were provided on the process of participant selection, data collection, and data analysis. In the next chapter, the findings from the participant interviews are detailed in terms of each of the research questions.

Chapter Four: Findings

The four research questions examined in this study were: (a) What perceptions do adult women have regarding the meaning of healthy living? (b) What factors do adult women perceive as facilitating living a healthy lifestyle? (c) What factors do adult women perceive as the benefits of living a healthy lifestyle? and (d) What factors do adult women perceive as the barriers to living a healthy lifestyle? In this chapter, I will outline common themes that emerged from participant interviews and field notes that I analyzed both deductively and inductively, in order to develop all applicable codes. I will also discuss the results of the demographic survey, which includes such factors as size of community, levels of education, living arrangements, community services, and household income.

Description of Participants

I am able to describe the eight participants in this research study through the demographic information collected in the demographic survey. I found that the participants lived on the eastern side of Prince Edward Island. Four of the participants lived in communities with a population between 1,500 to 2,999 and the other four lived in areas that have a population of less than 500 people. Seven of the eight participants lived with a spouse or partner; one lived alone. All eight participants lived near parks and recreational/fitness facilities, and there was a range of community services that were available to them in their communities. Participants had varying levels of education and household income, as illustrated in Table 5. Note that, in regards to the demographic survey, the participants were allowed to check off more than one category for the “living arrangement” and “community services” questions.

Table 5

Demographic Characteristics of the Participants

Characteristics	Number of Participants
Education	
Less than high school	1
High school graduate	2
Some post-secondary	1
Completed trades/college certificate or diploma	2
Some university	1
Completed university degree	1
Living arrangements	
Alone	1
With spouse (husband)	7
With children under 18 years of age or older	2
With other relatives	1
Total household income	
$20,000 - $29,999	2
$40,000 - $49,999	1
$50,000 - $59,999	2
$60,000 - $79,999	2
$80,000 – or more	1
Population	
Population under 500	4
Population of 1,500 – 1,999	3
Population of 2,500 – 2,999	1
Community services	
Health care providers	3
Youth workers	5
Long term care facilities	7
Parks or recreational/fitness facilities	8
General or convenience store	7
Grocery store	3
Other	2

Smoking	
Previous smokers	5
Never smoked	3
Current smokers	0

Upon completion of the interview, I asked each participant to rate their health in relation to other people their age. A nominal rating scale was used, where the levels were defined as excellent, very good, good, fair, and poor. This question was asked in order to ascertain how participants perceived their own health. Three of the eight participants rated their health as very good and the remaining five rated their health as good.

The following section describes the participants' response to the first research question. The participants were asked about their perceptions of healthy living.

Women's Perceptions of Healthy Living

The meaning of healthy living.

When the women told me their perceptions regarding the meaning of healthy living, each woman provided different information; however, there was some overlap. Overall, the women identified four categories related to healthy living: (a) healthy eating, (b) physical activity, (c) spirituality, and (d) lack of addictions.

Healthy eating.

The first category defined in the women's perception of healthy living was healthy eating. Three themes were identified within this category: (a) eating an appropriate diet, (b) eating in moderation, and (c) home cooked meals.

Eating an appropriate diet.

All eight women believed that eating an appropriate diet was important for healthy living; however, eating an appropriate diet had different meanings among the participants. During the interview, this theme was mentioned in their definition of healthy living by most of the participants. The following are quotations from the participants (all names are pseudonyms) as they discussed eating an appropriate diet:

> Diane: ... 3 good meals a day and it means going by the Canada Food Guide…. I think it really plays a big role in your health if you don't eat properly.
>
> Ann: ... eating less sugar … trying to eat less processed foods.
>
> Lisa: … if I'm … eating relatively well … I don't get as out of whack as easily.
>
> Shayla: Eating properly … that would be the physical aspect

Eating in moderation.

Three participants mentioned eating in moderation and their definitions of moderation appeared to be consistent. These women defined moderation as limiting consumption of certain foods. The following are quotations from the participants as they discussed eating in moderation:

> Shayla: ... just eat it every now and then... moderation.
>
> Karla: I feel even junk food is good, but in moderation.

Home cooked meals.

Half of the participants (four out of eight) believed cooking a complete meal (e.g., preparing a meal containing the foods within the Canada Food Guide) was

important to healthy eating. Overall, the women stated that eating fast-food or grabbing a bite from home on-the-run was not conducive to healthy eating.

> Karla: ... we had no time to prepare ... but now we can... We have meat, potatoes and a salad.
>
> Tayler: … so I've been trying really hard to get back to what I call old-fashioned cooking.
>
> Diane: I think … get rid of some of the fast food joints in town and in Montague. I think that might go a long way. But, that is definitely not going to happen.

Tayler spoke about how she believed parents are in a rush and that it hurts their children if they don't cook a proper meal.

> Parents are in a rush and they don't take the time to make meals and a lot of parents rush the kids off to hockey….I try very hard on the weekends to make a big pot of soup or a big casserole or so, so she has something ahead. To me that's logical. Everybody should think of that and if you can do that, then you have something ready for supper on the night when you have to rush.

Tayler also believed there is a relationship between advertising and unhealthy food choices.

> Tayler: There is way too much advertising for the fast-food places ... You don't see that much advertising for healthy choices … so much advertising for the fast-food places that you consciously have to think – that's not healthy.

Physical activity.

Similar to healthy eating, the women's responses varied regarding physical activity. Two themes were identified within this category: having a regular exercise routine and being physically active, but not having an exercise routine.

Having a regular exercise routine.

Having a regular exercise routine was mentioned by four of the eight women; however, the women had different definitions for "regular exercise" and how often one should exercise. The following are quotations from the participants as they discussed the importance of exercise:

> Susie: Exercise is … a large part …of healthy living ... But, I don't practice what I know.
>
> Ann: I don't believe in strenuous physical activity. Sustained is more important. Physical activity to me is generally walking, gentle exercising, and yoga.
>
> Shayla: … getting exercise … would be the physical aspect. Mentally of course would be exercise.
>
> Lisa: Walking. I try to walk every day.

Being physically active, but not having an exercise routine.

Being physically active, but not having an exercise routine, was mentioned by one participant. Diane felt that physical activity was important; however, she did not enjoy exercising in the traditional sense. She said:

> I like to get out and do something physical. I enjoy skiing in the winter time and snowmobiling. I enjoy getting out in the fresh air... as far as

> aerobics or anything like that; I'm not into anything like that at all (Diane).

One participant held unique beliefs among the eight participants and, therefore, her information cannot be captured in the two themes described above. While she understood the importance of physical activity and that it was vital in maintaining a healthy life, she did not exercise. Even though she knew it is important, she does not do it because she doesn't want to. In her own words, she "hate[s] it" (Erika).

Spirituality.

The concept of spirituality was reported by four of the participants as being required to live a healthy life; however, spirituality was defined differently among the women. The term spirituality referred to religion, the church, and the Holy Spirit for three participants; however, the fourth participant believed it referred to peace and inner strength and was not related to the church. The following are quotations from the participants as they discussed spirituality:

> Diane: ... your Christianity ... plays a role in just your overall outlook in life.
>
> Tayler: ... sense of peace ... to calm you down.

Lack of addictions.

The women stated that, in order to have a healthy life, addictions to smoking and alcohol cannot exist. The concept of addictions, or lack of addictions, was included in six of the participants' definition of healthy living. This was the only category where the majority of the women agreed on the definition, not smoking and drinking in moderation. Five out of eight participants believed that smoking was not part of living a

healthy lifestyle and it needed to be avoided. The following are quotations from the participants as they discussed smoking:

> Ann: ... obviously, avoiding some things. I gave up smoking a few years ago.
>
> Karla: I don't smoke, but I used to smoke. I know that if I still smoked today, I wouldn't be here.

Four out of eight participants believed that drinking alcohol is not part of a healthy lifestyle, but they believed it was not detrimental to their health if used in moderation. The following are quotations from the participants as they discussed drinking:

> Karla: I know heavy drinking wouldn't be good, but we social drink... moderation.
>
> Tayler: There is too much, too heavy, too excessive drinking and that can't be good.

A number of additional aspects to healthy living arose throughout the interviews; however, they were less common across the sample of participants, with only one or two participants mentioning them. Examples of the less common aspects related to the participants' perception of healthy living include self-management, having a natural lifestyle, buying local foods, having alternate medical care (acupuncturist or naturopath), eating alternate foods (organic), volunteering, and sleep patterns.

In conclusion, when women in this study were asked about their perceptions of the meaning of healthy living, the majority had different perceptions about how to live in a healthy way. The women identified four categories related to healthy living: (a) healthy eating, (b) physical activity, (c) spirituality, and (d) lack of addictions. The next

section addresses the factors that the participants perceive as facilitators for living a healthy lifestyle.

Facilitators for living a healthy lifestyle.

During the in-depth interviews, participants were asked what they perceived to be facilitators to living a healthy lifestyle. The women had considerable amounts of information to offer related to this question, which may have meant that they had a large number of influences affecting their ability to live a healthy life.

There were varying responses among the eight women, but six recurring themes did emerge: (a) balance, (b) self-confidence, (c) being in control, (d) supportive family members and friends, (e) spirituality, and (f) public policy.

Balance.

Five of the participants believed that having balance in their lives made it easier for them to live a healthy life. The participants wanted to balance their family life with their personal and work lives, as well as balance the physical, mental, and spiritual aspects of their lives. The following are quotations from the participants as they discussed balance:

> Diane: ... healthy living is having your life in equal balance, whether it be your physical activity, eating habits, emotional life and Christianity in balance...this contributes to a healthy lifestyle and healthy living.
>
> Lisa: ... emotional, physical, spiritual kind of whole ball of wax. Trying to keep that in balance … keeping my work schedule in balance too is important … It's draining. I have to keep balanced.

Self-confidence.

Six participants noted that self-confidence is needed in order to take action or make necessary changes to acquire and maintain a healthy lifestyle. However, three of those six participants believed they did not possess enough self-confidence to make the change to becoming a healthier person. The following are quotations from the participants as they discussed their lack of confidence:

> Lisa: What do people think? I tend to doubt myself at times.
>
> Erika: Last year I tried Curves. I felt it competitive there, with the other women. I felt pressure and because there is a time thing, I'm holding somebody else up … It just put too much pressure on me.

However, Shayla believed she had the confidence to live a healthy life and, subsequently was not influenced by the things around her. She stated that exercise is "a choice we make … just like everything else. If you don't do it, it's nobody's fault but yours" (Shayla).

Being in control.

Three participants believed that being in control made it easier to engage in a healthy lifestyle. Having control over themselves helped them to exercise on a regular basis, eat healthy, and maintain control over their addictions. The following are quotations from the participants as they discussed being in control:

> Shayla: ... I think the more you know yourself, the more you can control yourself and that's what we've been talking about a bit.
>
> Erika: It's dependent on the person themselves; on your control ... I think it's being in control of yourself. I think I could be in control of my exercise. I think I could be if I really set my mind to it … its dependent

> on the person themselves, on your control over your food … I need to be very in control.

Supportive family members and friends.

Most of the participants (seven) believed that having a supportive family is necessary in maintaining a healthy lifestyle and two participants mentioned specifically that they had supportive family members. They believed that their family helped, or made it easier, to have a healthy lifestyle.

The women specifically credited the support of their families for helping them to quit smoking. The following are quotations from the participants as they discussed quitting smoking:

> Diane: My darling husband, whom I married, decided it was not very... how did he put it? ...was not very feminine for a woman to smoke. So, I quit.
>
> Ann: Nobody wanted me to do it. My family and my peers ... I got to the point where I started thinking if I get cancer I have to look my kids in the eye while they say to me, 'why didn't you just quit'? And, I couldn't come up with a reason. If I get cancer now, fine I do, but at least I did something.

One participant was neither influenced by family nor friends. She stated that the decision to live a healthy life may only be made by her, and that influences were irrelevant to her:

> [Living a healthier lifestyle] is a very individual thing. It's an individual decision (Shayla).

Five participants believed that friends were a facilitator of healthy living. They stated that their friends helped them have a healthy lifestyle, eating better, and getting regular physical activity.

> Diane: … This contributes to a healthy lifestyle and healthy living. Your friends and family play a big part in that too.
>
> Ann: Most of my friends walk and they are supportable.
>
> Erika: Your friends …things like that have a big impact on how you feel [about your diet and state of mind].

Spirituality.

Spirituality was another common facilitator of healthy living highlighted by the participants. As mentioned earlier in the chapter, spirituality can refer to both the religion experienced in a church community, and also the feeling of peace and inner strength, which does not necessarily include ideas of "church." Three participants believed that practicing their religion made it easier for them to live a healthy lifestyle, whereas one participant believed that feeling a sense of inner peace made it easier to live a healthier life. The following are quotations from the participants as they discussed spirituality:

> Diane: It [the church] plays a role in just your overall outlook in life maybe. Probably gives it a little positive spin. It affects all areas of your life
>
> Tayler: Yes, I do [believe the church is needed to have a balanced lifestyle] … Jehovah Witnesses or Mormons have brought that up before about a sense of peace and things to calm you down.

> Ann: People quit all the time. Why couldn't I just quit? I couldn't. It took a long time and it took prayer. I was really surprised by that because will-power, I have discovered, does absolutely nothing.

Public policy.

One participant listed public policy as a facilitator of living a healthy life. Specifically, Tayler mentioned two types of policies: health care and the environment.

Health care policy.

Tayler believed that a new health care policy would make it easier for her and others to live a healthier life. She stated that living a healthy life included such factors as eating organic foods, accessing alternate medical care, and buying local. Tayler noted how currently, seeking alternative medical treatment can be limiting for some people:

> People who want to go see a naturopathic doctor because they choose to treat by herbs or supplements or diet changes, lifestyle changes can't go because it's too expensive. Therefore, people will say ... to us, why doesn't Medicare help us out? We are trying to do it ourselves. We are trying to do it the natural way (Tayler).

Other participants may not have mentioned the influence of policy on healthy living because participants were not prompted during the interview with policy questions.

Environmental policy.

Tayler also believed that new environment policies would make it easier for her and others to live a healthier life. She said that it would be easier to live a healthy life if there were more policies pertaining to the pollutants that were going into the environment:

> People attribute a lot of the illnesses to the fertilizer on this Island ... pesticides and so on … All the traffic and all the food coming from California and coming from China. All this traffic back and forth ... There's so much bad stuff going into the environment (Tayler).

Similar to above, other participants may not have mentioned the influence of policy on healthy living because the participants were not prompted during the interview with policy questions.

Three additional facilitators emerged from the analysis: sleep, self-management, and weather. However, they were less common across the sample of participants.

In conclusion, the second research question explored what women in this study perceived as facilitators to living a healthy lifestyle. Summarizing the most common elements, the women believed there were six categories of facilitators related to living a healthy lifestyle: (a) balance, (b) confidence in oneself, (c) being in control, (d) supportive family members and friends, (e) spirituality, and (f) public policy.

The next section focuses on an exploration of the factors that women perceived as the benefits of living a healthy lifestyle. The women's responses when describing the benefits were fairly similar to one another.

Benefits of healthy living.

When I asked participants about their perceptions regarding the benefits of healthy living, they appeared to struggle when responding. I rephrased this question a number of times to help promote a response. Overall, the women identified four benefits of healthy living: (a) alleviating stress, (b) enjoying life, (c) having more energy, and (d) being sick less often.

Alleviating stress.

The first benefit of living a healthy life the participants identified was alleviating stress levels. Three participants believed, if they could balance their lives, their stress would decrease. The following are quotations from the participants as they discussed the benefit of alleviated stress:

> Ann: Down time. Having mental down time, so there is balance. Trying to find some balance... Cutting myself off from trying to do too much or trying to fit into someone else's expectations. Being able to relax and not feel guilty about it.
>
> Erika: Diet... physical activity... state of mind – if you're stress free, your friends, things like that have a big impact on how you feel.

Enjoying life.

Five participants believed that, if they could have more balance and less stress in their lives, they might be able to experience the benefit of enjoying life more than they do now. The following are quotations from the participants as they discussed enjoying life:

> Erika: ... means you live a longer life... be more physically active ... Just good health and general living makes you feel better all over.
>
> Lisa: ... being able to get out there and be in life. The energy... Being with people... To give... To volunteer... To walk my dogs....

Having more energy.

Three participants believed that an increase in energy is another benefit to living a healthy lifestyle. The women noted that having extra energy would help them to be a

stronger, better person, as well as being less tired. The following are quotations from the participants as they discussed having more energy:

> Karla: I think I would have more energy and less weight to haul around.
>
> Shayla: It makes you less tired. It gives you energy, for sure.

Being sick less often.

Seven participants believed that a healthy lifestyle leads to fewer sick days. The women noted that, if they eat healthy and exercise regularly, they would suffer from fewer illnesses. The following are quotations from the participants:

> Diane: … if you're not physically active, you're just going to suffer from illnesses... if you don't eat healthy, you're going to be overweight and then you run into other health problems. I think it is very, very important to eat healthy and to be physically active.
>
> Erika: … means you live a longer life and also to keep medical costs down, being more physically active at work. Just good health and general living makes you feel better all over.

In conclusion, the third research question asked women in this study what they perceived the benefits to be in living a healthy lifestyle. It is important to note that the women referenced the influence of balance when describing two of the benefits of having a healthy lifestyle; alleviating stress and enjoying life. Overall, the women stated there were four benefits to healthy living: (a) alleviating stress, (b) enjoying life, (c) having more energy, and (d) being sick less often. The next section presents findings connected to the fourth research question: the barriers of living a healthy lifestyle.

Barriers to living a healthy lifestyle.

Participants were asked what they perceived to be the barriers to living a healthy lifestyle. The women offered a significant amount of information pertaining to this question and identified eight categories of barriers to living a healthy lifestyle: (a) lack of energy and motivation, (b) stress, (c) lack of time, (d) workplace conditions, (e) location of exercise facilities, (f) community size, (g) cost of food, and (h) lack of family support.

A lack of energy and motivation.

Four participants reported that, due to a lack of energy and motivation, they were unable to have healthy lifestyles. The following are quotations from the participants:

> Ann: I'm at my desk all day. I'm on the computer. I'm on the phone. I multi-task all day long. Sometimes I fall asleep in the car coming home. I'm beat. Energy and motivation is not high to do anything, house work included.
>
> Lisa: The biggest one for me is probably fatigue. I hate being tired. I have too much I want to do or be involved in. If I'm not sleeping well and I'm tired [have no energy] and just dragging myself, forcing myself through a day, that's probably one of my biggest barriers and I hate it.

Feeling stress.

Two participants stated that too much stress in their lives makes it difficult to have or maintain a healthy lifestyle. They believed that stress affected their eating habits, physical activity levels, and overall state of health. The following are their quotations:

> Shayla: Job, other people, dealing with aging parent, but mostly when I get off track ... I can't be bothered [to exercise].

> Susie: There was always somebody who had something and it was a very high stress level... They would get sick sometimes during the day, but there were so many people. There was always somebody.

Experiencing a lack of time.

Five participants believed they had no time to lead a healthy lifestyle. These women found it hard to find time in their busy schedules to cook healthy meals and exercise. A further three participants, who had other individuals residing with them, expressed additional difficulties, such as having to prepare additional meals due to taste preferences and having to run additional errands in the day for the other individuals residing with them. The following are two participants' quotations:

> Ann: Time ... is my biggest barrier to physical exercise ... Exercise, you know we're gone all day. We leave around 7 in the morning. We're not home until after 6 in the evening. Then, we have to make supper. Then it's the thing where you don't want to go out again, after being gone all day ... So finding time within the family's routine is a large barrier.
>
> Karla: We had no time to prepare a [meal] ... But now we can... We have meat and potatoes, and a salad.

Workplace conditions.

Seven participants viewed their workplace as hindering their ability to live a healthy life. Two of the participants, who worked shift work, faced the additional barrier of finding time to have and maintain balance for a healthy lifestyle, due to the odd hours they worked. The following are two participants' quotations:

> Karla: ... I know when I work evenings I don't eat many fruits and vegetables. I'll grab something quick before I go to work – like at 11

> o'clock. I'll have a sandwich at suppertime. Then, the next week when I'm home for supper, I'll make vegetables.
>
> Lisa: ... a lot of that has to do with my schedule ... because I'm not on a regular schedule every day. Trying to eat healthy is a challenge to society, but it's also a challenge when you don't have a regular schedule too...

Location of exercise facilities.

One of the largest barriers to engaging in a healthy lifestyle, noted by participants, was the gym itself. Seven participants had a negative association with the gym, each for different reasons. The women used a negative tone of voice when they discussed the gym, almost as if they loathed the thought of it. A few believed the gym was too sterile and did not provide them with enough stimulation or motivation to exercise. The following are quotations from the participants:

> Susie: I'm not one for doing anything alone. That's the big draw back with the gym out here. I have no desire to go to the gym out here. There is just not enough people around.
>
> Erika: ... can get kind-of boring after a while. But, anything does... same routine.
>
> Shayla: ... just doesn't want to be stuck in the gym.

Other participants disliked the gym for esthetic reasons.

> Ann: If you have to shower and then redo your make-up and hair? No... That's not going to happen.
>
> Karla: ... doesn't enjoy the sweating part of going to the gym.

One of the participants stated that she did not have adequate access to a gym or other recreational facilities because she lived in a rural area:

> Sometimes I think if there was a gym close, I wouldn't mind going. But, it's not worth my while to travel to Montague or travel to town after a day of work to go there … If it was a little closer I might go the gym (Karla).

Instead of just focusing on what her community lacks, Karla did attempt to think of ways in which the community could better accommodate physical activity:

> You know that little room they have at the rink? If they had a couple of treadmills or something up there... just a little...more in the winter than in the summer (Karla).

Community size.

Five participants considered the size of their home-town to be a barrier to healthy living. As mentioned earlier, four of the eight participants lived in communities with a population between 1,500 to 2,999 people and the other four lived with a population of less than 500 people. These small rural communities cannot accommodate appropriate exercise programs, due to the high cost or lack of participation. The following are quotations from two participants:

> Susie: There are just not enough people, not enough money up here ... It gets to be pretty pricey.
>
> Ann: … have those kinds of facilities available without driving half an hour to get there or having them unreasonably priced.

One participant believed that her small community could not afford to advertise the local facilities:

> I know there are trails around here but I don't know where they are and I don't know how to find them … there is no information ... I found out there are three places to do yoga. I just found that out yesterday. I didn't know about that. It's a matter of people not advertising (Ann).

Ann felt that she should not have to take action in order to find out what type of facilities or activities were available to her. She believed it was the community's responsibility to tell her. She also believed that the issue was not necessarily the size of the community, but due more to the size of the province. Ann said:

> Montague has very little and Charlottetown doesn't even have that much. For a city, it really doesn't have a lot of physical activity choices for adults.

Other participants believed that the rural community created additional issues, such as a lack of shoulders on the roads and a lack of street lights.

> Ann: … not having shoulders on our roads makes them no good for walking.
>
> Shayla: … more street lights for the wintertime would help.

Another participant believed that the community could not help her. When asked if she would attend a gym if there was one nearby, Erika responded:

> "No. It wouldn't make any difference I think. I have to get my mind around the thought that I would enjoy it."

The cost of food.

Two participants listed the cost of food as another barrier, noting that healthy food costs more money. Ann said:

> "Again, some of the old barriers to eating were financial because good food costs more. Healthy food always costs more and if you want to get into specialty limited foods you are going to pay a lot for it".

One additional barrier emerged from the analysis. For one participant, the media itself acted as a barrier and influenced her ability to live a healthy life. Tayler specifically focused on advertising and its effects:

> "There is way too much advertising for the fast food places, etc. You don't see that much advertising for healthy choices".

The lack of family support.

Two participants mentioned a lack of family support as having a large influence on the difficulties they experienced when trying to lead a healthy lifestyle. They noted that their families influenced the foods they ate and their ability to exercise. Karla said:

> "When the kids were home ... we would be having ... let's whip up a pizza or fry up a chicken burger. We had no time to prepare."

Three participants not only lacked support from their family, they experienced a direct negative effect in the form of abuse earlier in their lives. They had lived with alcoholics when they were young and two of them had dealt with physical abuse. The following are quotations from two participants:

> Erika: I grew up in an alcoholic family ... I need to be very in control of what I do… drink ... I'm scared of being addicted. That's why I'm very cautious.
>
> Lisa: Meal time was difficult ... If you didn't say or do the right things at the dinner table, you often got hit.

In conclusion, the final research question asked women in this study what they perceived the barriers to be to living a healthy lifestyle. The largest two barriers the participants experienced related to the gym and their workplace. Other barriers included community size; a lack of time, energy, and motivation; the refusal to change their lifestyles; cost of food, and a lack of family support. In the final chapter (Chapter 5), the findings just presented are connected with the material explored in the literature review (Chapter Two).

Chapter Five: Discussion

This chapter focuses on interpreting the findings of this study, as well as comparing the results of this study with results reported in the research literature. Specifically, I will consider the connections between my findings and the healthy living literature. I will also address the implications of this study for education, as well as share ideas for future research. The four research questions investigated in this study were: (a) What perceptions do adult women have regarding the meaning of healthy living? (b) What factors do adult women perceive as facilitating living a healthy lifestyle? (c) What factors do adult women perceive as the benefits of living a healthy lifestyle? and (d) What factors do adult women perceive as the barriers to living a healthy lifestyle? I will discuss each of the research questions and my findings in turn.

Addressing the Research Questions

Research question one: What perceptions do adult women have regarding the meaning of healthy living?

The participants in this study identified a number of factors as determinants of healthy living; the two determinants mentioned by almost all of the participants were eating a healthy diet (n=8) and engaging in regular physical activity (n=7). The other determinants identified by the participants were: not smoking (n=5), being spiritual (n=4), and drinking in moderation (n=4).

Healthy living.

Participants in this study had perceptions of healthy living similar to those reported in current literature. The Public Health Agency of Canada (2012b) defines healthy living as living in healthy ways, utilizing an individuals' physical, mental, and spiritual ability to make healthy choices pertaining to diet, physical activity, and having

a healthy weight. Similarly, the World Health Organization (2013) defines health as being in a state of complete physical, mental, and social well-being. Similarly, Paluck et al. (2006) found that women's perceptions of healthy living related to their physical and mental health. They conducted focus groups with women in Saskatchewan and concluded that not smoking, being physically active, and not having emotional problems or stress contribute to a healthy life.

Healthy diet.

It is not surprising that every participant (n=8) mentioned a healthy diet. There has been increased education and media attention in the area of healthy eating. Specifically, government and non-government agencies have developed strategies and public messages for individuals to help them to eat a healthy diet (e.g. Healthy Eating Alliance). This finding is important because it shows that the participants are aware that a healthy diet is important for a healthy life. However, knowing a healthy diet is important doesn't mean individuals have the ability to translate that into healthy behaviours, as demonstrated by both Pepin et al. (2004) and Gottschall-Pass et al. (2007). Pepin et al. (2004) discovered that people have the nutritional knowledge, however, the individuals in their study did not feel confident about applying the knowledge. They felt confused about which nutritional recommendations to follow. Similarly, Gottschall-Pass et al. (2007) found that, while adults had a good general knowledge of nutrition, they lacked more specific knowledge about healthy food choices and had difficulty translating their nutritional knowledge into behavioural change.

Physical activity.

It is also not surprising to discover that nearly all participants (n=7) mentioned physical activity as being associated with healthy living. Similar to healthy eating,

physical activity is being promoted for healthy living as shown by the ParticipACTION television commercials, for example, which link increased levels of physical activity with healthy living. Despite the fact that the majority of the participants in my study recognized the desirability of physical activity, most residents in Prince Edward Island have difficulty translating that knowledge into action. The Canadian Community Health Survey (2007) determined that over half (51.1%) of the residents in Prince Edward Island were inactive and did not choose to include daily physical activity in their lives (Statistics Canada, 2007).

Not smoking.

Another aspect of healthy living mentioned by over half of the participants was not smoking. Participants (n=5) believed that living a smoke-free lifestyle is important to healthy living. This finding was surprising as I expected almost all participants to believe in the importance of not smoking due to the increased media attention of the negative health consequences of smoking (Health Canada, 2011a; World Health Report, 2005). However, five of the eight participants had smoked in the past, while three participants never smoked. It may be possible that the participants who had never smoked would not have thought to mention smoking as a factor in healthy living as it would not specifically relate to their own lives. Researchers at Health Canada (2011a) suggest that quitting smoking would be the best thing that individuals could do to improve their health.

Spirituality.

A fourth characteristic of health living, spirituality, was identified by half of the participants in this study. Existing research studies have shown that women believe that spirituality is an important dimension of living a healthy life. Paluck et al. (2006) found

that women believed spirituality maintained a healthy mind because it helped to ensure balance in their lives. Musgrave et al. (2002) found similar results in that women believed in the unity of the mind, body, and spirit. They felt that both health and disease (illness) was holistic. Ideas of a holistic approach to health, and ensuring balance in life, resonated strongly with participants in this study.

Drinking in moderation.

The final aspect of healthy living identified by participants in this study was moderate drinking. Participants (n=3) linked this aspect with a healthy lifestyle. The Canadian Community Health Survey (2007) determined that almost one-quarter (24.7%) of the population of Prince Edward Island, aged twelve or older, reported consuming five or more drinks per occasion at least twelve times in the past twelve months, compared to one-fifth (21.9%) of the population of Canada (Statistics Canada, 2007). The definitions of healthy living that were offered by the Public Health Agency of Canada (2008) and the World Health Organization (2011a) did not include alcohol. The participants in this study may have suggested alcohol as an aspect of their definition of healthy living due to the higher percentage of individuals drinking in Prince Edward Island (Statistics Canada, 2007). The participants may be aware and may be affected by individual's drinking due to the increased exposure to it. As a result, drinking may be more of an influence for the residents of Prince Edward Island and may contribute to participants in this study mentioning drinking in moderation as an influence on healthy living.

Overall, the participants in this study believed that living a healthy life includes eating a healthy diet, maintaining appropriate physical activity levels, being spiritual, not smoking, and drinking in moderation. These factors flow from the impacts of the social

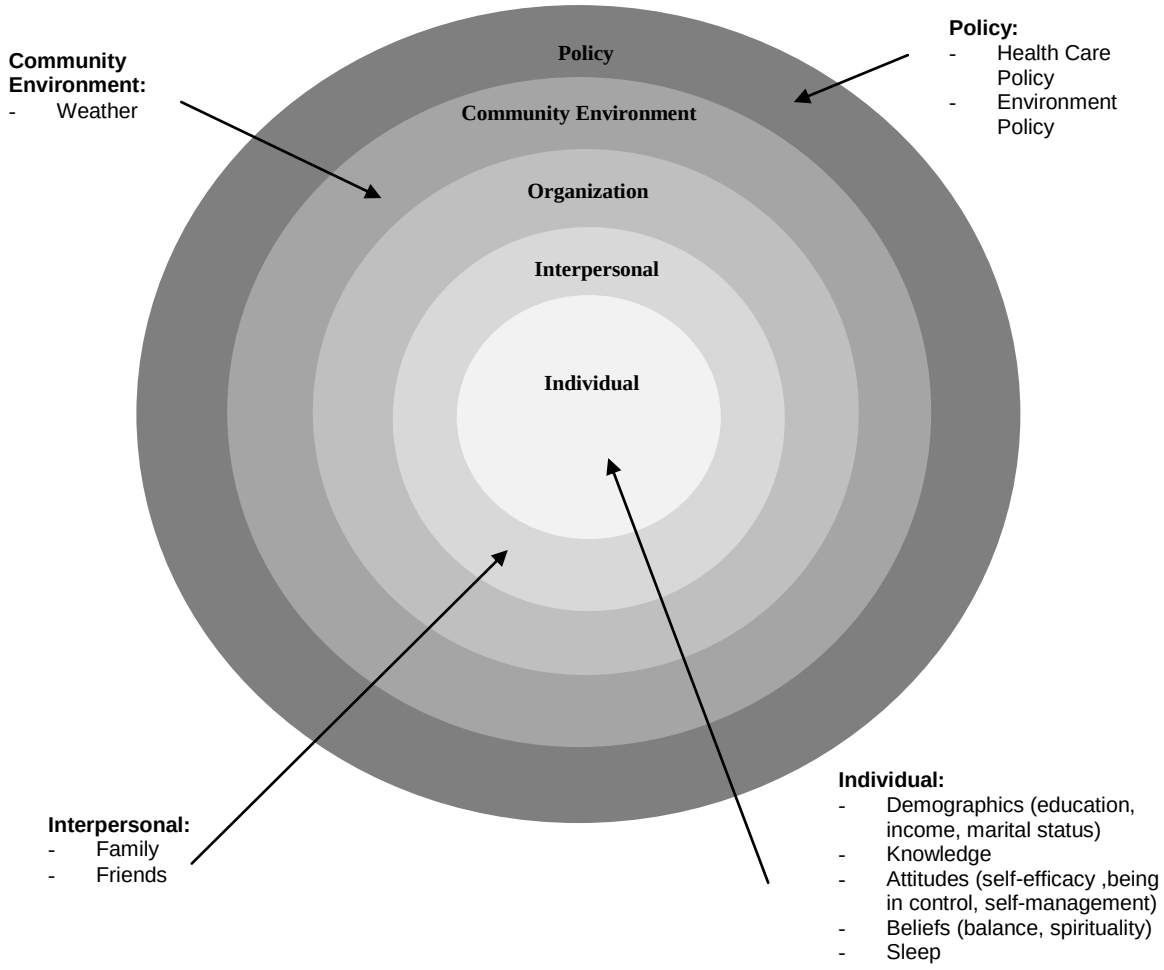
and physical environments on the participants experienced, as well as from their own personal beliefs, as per Stokols' social ecological model. The identification of these factors help us understand how women in Prince Edward Island define healthy living. These are significant factors which must be addressed when designing programs to help overcome barriers to healthy living, and to make programs more relevant for potential participants.

Research question two: What factors do women perceive as facilitating living a healthy lifestyle?

When asked about what factors facilitate a healthy lifestyle, the majority of participants in this study identified the following: supportive family members and friends (n=7), confidence in oneself (n=6), balance (n=5), being in control (n=3), spirituality (n=3), and public policy (n=1). Other factors mentioned by a few participants included sleep, self-management, and the weather. Figure 2 shows that the factors that most facilitate the participants living a healthy life map into four of the five levels of social environmental influences of health promotion, identified by Stokols in his social ecological model (Stokols, 1996; Stokols et al., 2003). The majority of the facilitators are at the individual and the interpersonal levels. The individual factors relate to the social environmental influences of attitudes (self-efficacy, being in control, and self-management), beliefs (balance and spirituality), and sleep. Individual influences also include the demographic data that I gathered through the survey that participants completed at the end of the interview. These data include level of education, marital status (who do you live with), and income levels. The participants' facilitators to living a healthy life also relate to the environmental influence of the interpersonal level, which identifies individuals' social support systems (family and friends). The two remaining

factors of weather and public policy are linked to the social ecological model's level of influence of community environment and policy (healthcare and environment).

Figure 2 The Participants' Data Mapping onto Stokols' Social Ecological Model



The facilitators noted by this study's participants connect in many ways to the findings reported in the current literature; however, the current literature identified more facilitators pertaining to healthy eating and physical activity than the participants in this study. In regards to the healthy eating and the community environment, Richards et al. (2008) discovered that access to healthy foods is a facilitator of healthy living. These

researchers reported that women believe it would be easier to eat healthy if fresh fruits and vegetables were more readily available in convenience and grocery stores. In addition, Glanz et al. (2005) found that the placement of food on shelves in the stores influences women since the higher calorie and fattier foods tend to be placed at eye level and the healthier foods placed either higher or lower on the shelves. In regards to policy, Fitzgerald and Spaccarotella (2009) and Monsivais and Drewnowski (2007) discovered that food pricing is an influence on eating healthy foods. These researchers found that policies that influence food pricing affect the type of food women purchase, since healthy foods tend to be more expensive.

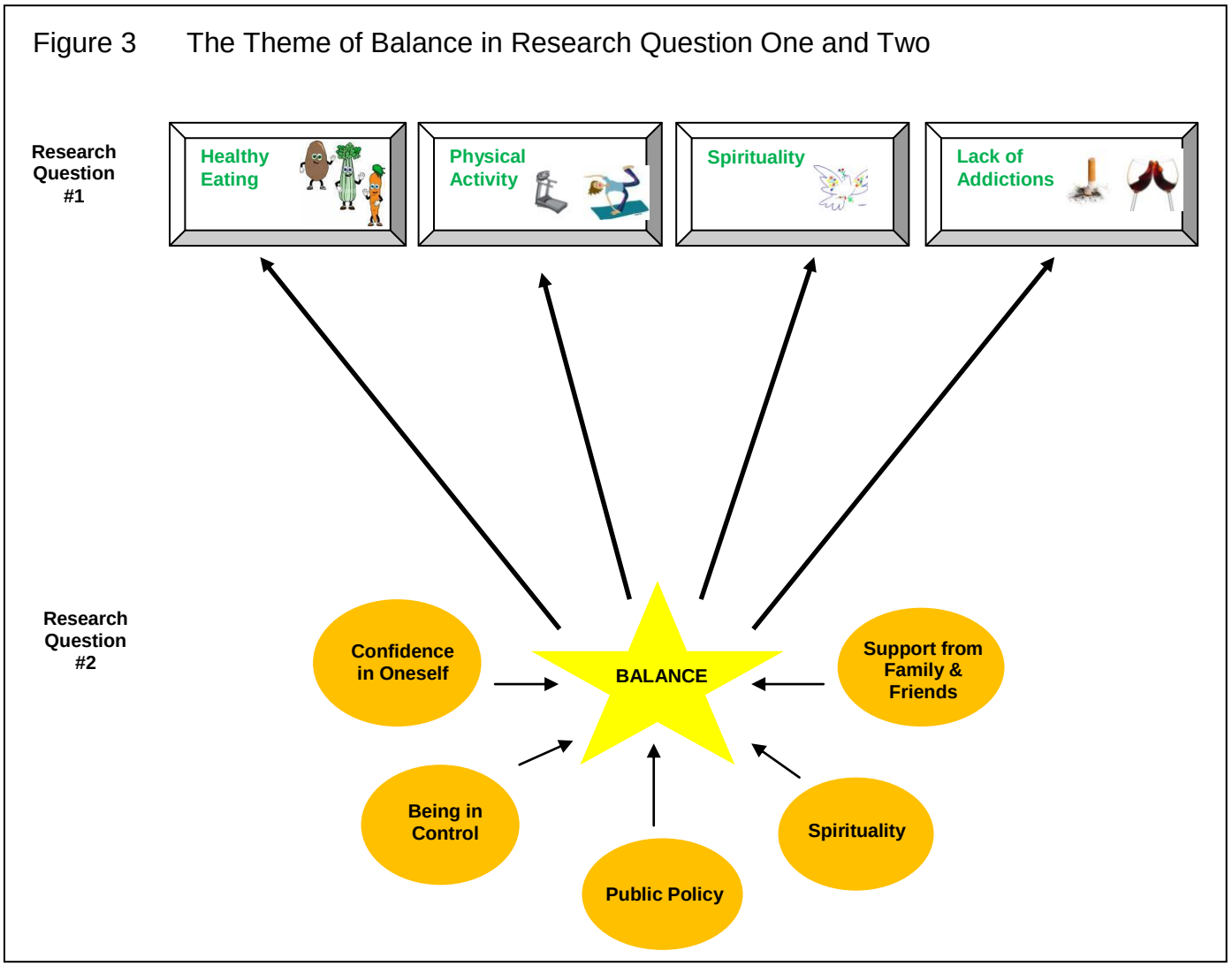
Other researchers found additional community environment facilitators (workplace or community groups) to healthy living as it relates to physical activity. Sallis et al. (1998) suggested that the workplace make some modifications (subsidize health memberships or install showers) in order to facilitate participation in physical activity. Fleury and Lee (2006) found that community groups can also be facilitators for physical activity, as women can see others exercising and be positively influenced by their behaviour. In regards to policy that may facilitate healthy living, Sallis et al. (1998) suggested that policies be created to reduce insurance rates for those individuals who were physically fit. They believed that if these policies were created, levels of physical activity would increase.

The participants in my study did not mention these additional facilitators; however, this may be due to study design. The studies described above incorporated literature reviews of qualitative and quantitative studies (Fleury & Lee, 2006; Fitzgerald and Spaccarotella, 2009; Sallis et al., 1998). As a result, they contained a large quantity of facilitators due to the combined sample size, whereas in my study there were no

predefined categories so the participants determined the facilitators based on their own perceptions.

As demonstrated in Figure 3, although participants in this study identified a number of facilitators to healthy living (supportive family members and friends, confidence in oneself, balance, being in control, spirituality, and public policy), balance was the overarching theme; all of the other factors relate to it. The finding that balance is an overarching theme is unique to this study and should be taken into account in future research in healthy living.

Figure 3 The Theme of Balance in Research Question One and Two



Supportive family members and friends.

Participants (7) in this study identified having supportive family members and friends as necessary to achieve balance in life. A number of current studies have highlighted the importance of social support from family or friends for women to change their dietary habits and increase their levels of physical activity (Eyler et al., 1998; Fitzgerald & Spaccarotella, 2009; Fleury & Lee, 2006; Nothwehr & Peterson, 2005; Shepard et al., 2006). This need is important to be aware of when wanting to modify behaviour.

Self-efficacy.

Balance in one's life may lead to perceptions of self-efficacy (Bandura, 1977, 1997). Participants (n=6) in my study identified self-efficacy as a facilitator of healthy living. Studies have found correlations between self-efficacy and dietary profiles, as well as between self-efficacy and levels of physical activity. If a woman's level of self-efficacy increased, she tended to eat healthier and had increased levels of physical activity (Ainsworth et al., 2003; Eyler, 2003; Fleury & Lee, 2006; Nothwehr & Peterson, 2005).

Balance.

It was clear from the participants that having a life in balance (5) makes it easier to live a healthy life. Paluck et al. (2006) discovered that women felt a need for balance, where balance involves the emotional, spiritual, and physical aspects of an individual. Musgrave et al. (2002) also found similar results in that spiritual, physical, mental, and social aspects are vital to a women's health.

Being in control.

One cannot achieve balance without having control over one's life. Thorne, Paterson, and Russell (2003) found that their participants wanted to be in control, so as to be able to live as healthy a life as possible while dealing with their chronic illnesses. Jerant, von Friederichs-Fitzwater, and Moore (2005) found similar results, where individuals, who believed they were not in control, had low perceptions of self-efficacy and felt less healthy.

Spirituality.

Being spiritual relates to having a greater sense of well-being and a better quality of life, which is essential for balance. Paluck et al. (2006) found that spirituality helped to ensure balance in women's lives. Researchers have also discovered that spirituality helps people to: (a) cope with mental illness better, (b) have better physical health, (c) have a sense of well-being, and (d) have better overall health behaviours. This may be due to providing our lives with context; thereby reducing stress (Daaleman, Cobb, & Frey, 2001; Koenig, 2004; O'Neill & Kenny, 1998).

Public policy.

Governments create healthy public policies to assist jurisdictional residents in living healthier lives. Fitzgerald & Spaccarotella (2009) have found that policies can influence individuals to make healthy lifestyle choices. Policy can influence food pricing, which affects the type of food individuals purchase (Fitzgerald & Spaccarotella, 2009). Policies could also be created which affect the workplace (for example, incentive programs for commuters) (Sallis et al., 1998). It is vital that policy be in place prior to educating individuals about healthy living. It would be discouraging for those being educated to learn that, for example, they need regular physical fitness but that there are

no local recreational facilities, walking paths, or sidewalks in their area of residence or work.

In conclusion, the participants in this study believed many facilitators of healthy living exist. Balance, self- confidence, feeling in control, supportive family members and friends, possessing spirituality, and creating effective public policy all contribute to healthy lifestyles. The concept of balance can be seen as the overarching theme, since the facilitators defined by the participants all relate to the concept of balance. As discussion of the previous research question showed, research has found that teaching individuals about the concepts surrounding a healthy diet and increased physical activity has been effective; however, putting these concepts into practice has been largely unsuccessful (Gottschall-Pass, Reyno, MacLellan, & Spidel, 2007; Pepin et al., 2004; Shepherd et al., 2006). If we want to assist or educate people in the area of healthy living, rather than simply providing people with information, we may have to teach holistically; teach to the entire person (mind, body, and spirit) in order to help individuals change their health behaviours. We need to take into account the influences on the individual. This may involve applying Stokols' social ecological model to considering how to change health behaviour since the individuals are influenced by the physical and socio-cultural environments (Glanz et al., 2008; Stokols, 1996; Stokols et al., 2003).

Research question three: What factors do adult women perceive as the benefits of living a healthy lifestyle?

The participants in this study identified four factors as the benefits of having a healthy lifestyle: being sick less often (n=7), enjoying life (n=5), alleviating stress (n=3),

and having more energy (n=3). These benefits pertain to both healthy eating and physical activity as these are aspects of healthy living.

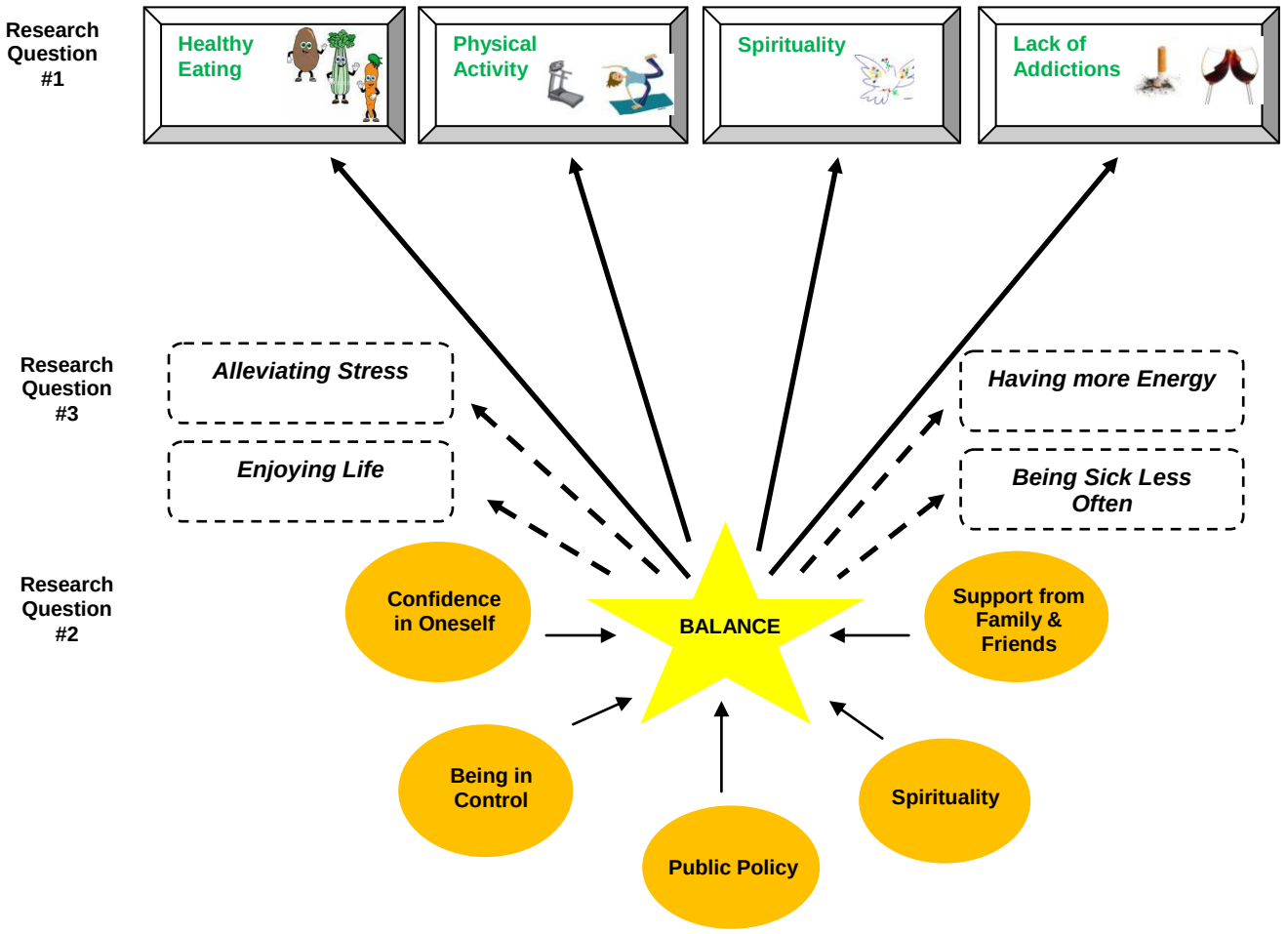
The factors perceived by the participants as benefits of healthy living were comparable in many ways to the findings reported in the current literature pertaining to healthy eating. Lopez-Azpiazu et al. (1999) discovered that individuals perceive the following as the benefits of healthy eating: preventing disease, staying healthy, having a better quality of life, controlling weight gain, being fit, living longer, having more energy, doing well at sports, and looking attractive. Eikenberry and Smith (2004) found similar benefits of healthy eating identified by participants: being healthy, feeling good, living longer, maintaining health, treating disease, preventing disease, being there for their kids/grandkids, losing weight, and maintaining current weight. The participants in my study did not mention a number of these benefits (controlling weight gain, living longer, doing well at sports, looking attractive, being there for their kids/grandkids); however, this may be due to study design. The studies that found these additional results were quantitative in nature. The former were designed for participants to complete surveys and were tailored specifically with nutrition-related objectives focusing on fruit and vegetable consumption. They were specific healthy eating studies and did not have the broader focus taken in my study on healthy living, which may explain why these studies yielded different findings.

The aspects perceived by the participants as benefits of healthy living were also similar to the findings reported in the current literature regarding physical activity. Current literature discovered that additional benefits of physical activity included increased social interaction and weight loss (Fleury & Lee; 2006; Shepherd et al., 2006).

Similar to the healthy eating benefits described above, the participants in my study did not discuss these additional benefits, which may also be due to study design.

One common theme woven throughout the examination of the benefits of living a healthy lifestyle was balance. The connection of the four benefits of healthy living identified by participants with the concept of balance is displayed in Figure 4. The need to alleviate stress may not exist if people were enabled to live lives that were in balance, balance between family and work demands in particular (Clark, 2000; Greenhaus, Collins, & Shaw, 2003). Participants pointed out that enjoying life would happen quite naturally if their lives were in balance and they were able to achieve equilibrium among the various factors of modern life. Koenig (2004) reported that people would have a better sense of well-being and a higher quality of life if their lives were in balance. The participants also believed that living a balanced life would afford them more energy and they would get sick less often. Having more energy would be the result of being in balance. The last factor, being sick less often, might not exist since if one were in balance, one would be living a healthier lifestyle. Koenig (2004) found similar results in that people would have better physical health and have better overall health behaviours.

Figure 4 The Theme of Balance in Research Question One, Two, and Three



In conclusion, the participants in this study believed that the benefits of living a healthy life included being sick less often, enjoying life, alleviating stress, and having more energy. These benefits would arise as a result of the participants living a healthy life and having learned about healthy living in a holistic approach which would take into account the person's entire being (mental, physical, and emotional). Placing the focus of learning on what influences the women's lives may enable the women to change their behaviour and have healthy lifestyles (Glanz et al., 2008; Stokols, 1996; Stokols et al., 2003).

Research question four: What factors do adult women perceive as the barriers to living a healthy lifestyle?

The participants in this study outlined eight barriers to living a healthy lifestyle. These include: the location of the exercise facilities (n=7), conditions in the workplace (n=7), experiencing a lack of time (n=5), the size of community (n=5), a lack of energy and motivation (n=4), feeling stress (n=2), the cost of food (n=2), and the lack of support from family (n=2).

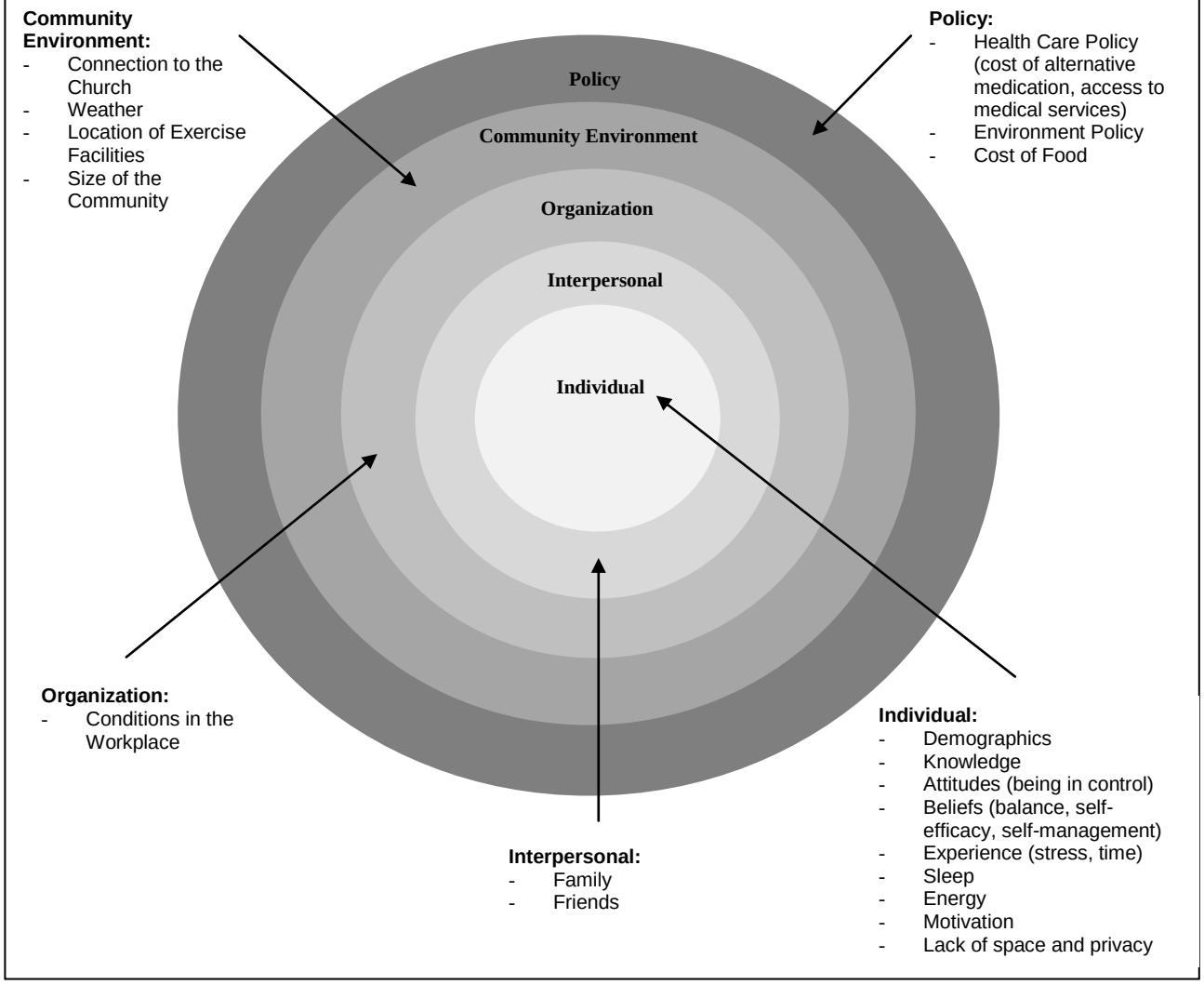
Participants in this study identified barriers to living a healthy lifestyle similar to those reported in current literature. Fitzgerald and Spaccarotella (2009) conducted a literature review on the barriers to healthy eating and physical activity. These researchers found many barriers relating to the five levels of influences in Stokols' social ecological model. Fitzgerald and Spaccarotella (2009) found that the barriers influencing people with healthy eating at the intrapersonal level (or individual level) include taste preferences, lack of nutrition knowledge and skills, and inadequate cooking skills. In regards to the barriers of physical activity, they identified physical limitations, lack of interest, lack of self-confidence and motivation, and lack of knowledge about the health benefits of being physically active. Barriers at the interpersonal level for both healthy eating and physical activity are culture, lack of social support to make changes, socio-economic factors, television viewing, and computer use. In relation to the community environment and organization, barriers surround the socioeconomic characteristics of the community in which the individual lives, and these influence both eating behavior (e.g. limited fresh food availability, access to stores, and high percentage of fast food restaurants) and physical activity (e.g. neighbourhood safety, urban sprawl, lower residential density, access to recreational facilities). Lastly, policies may be

implemented that affect food pricing so that prices are not seen as a barrier to healthy eating. Lopez-Azpiazu, et al. (1999) found the additional barriers to healthy eating as irregular work hours and willpower.

The participants in my study may not have perceived all of these unique barriers that were found in the literature for a number of reasons. One reason may be due to study design. A number of the studies were, in fact, literature reviews and, as a result, contained an abundance of barriers due to the combined sample size. In addition, some of the studies were quantitative in nature and contained surveys with questions related to specific, predefined barriers. My study was qualitative and exploratory in nature. The participants in this study have had different experiences than the participants in other studies. Prince Edward Island is a small province with a unique culture (University of Prince Edward Island, 2002). It is possible that the participants in this study have never had experiences connected with barriers identified in some studies, such as high crime for example.

Figure 5 maps the barriers identified by the participants in my study onto Stokols' social ecological model for they do seem to fit the organizational structure. They include: (a) individual (a lack of energy and motivation, feeling stress, experiencing a lack of time), (b) interpersonal (the lack of support from family), (c) organization (conditions in the workplace), (d) community environment (the location of exercise facilities, the size of community), and (e) policy (the cost of food) (Stokols, 1996; Stokols et al., 2003). The core concept of the ecological model is that behaviour has multiple levels of influences. As a result, approaches to improve health behaviours, such as education, must be effective concurrently at multiple levels (Glanz et al., 2008; Stokols, 1996; Stokols et al., 2003).

Figure 5 How Participants' Data Maps onto Stokols' Social Ecological Model

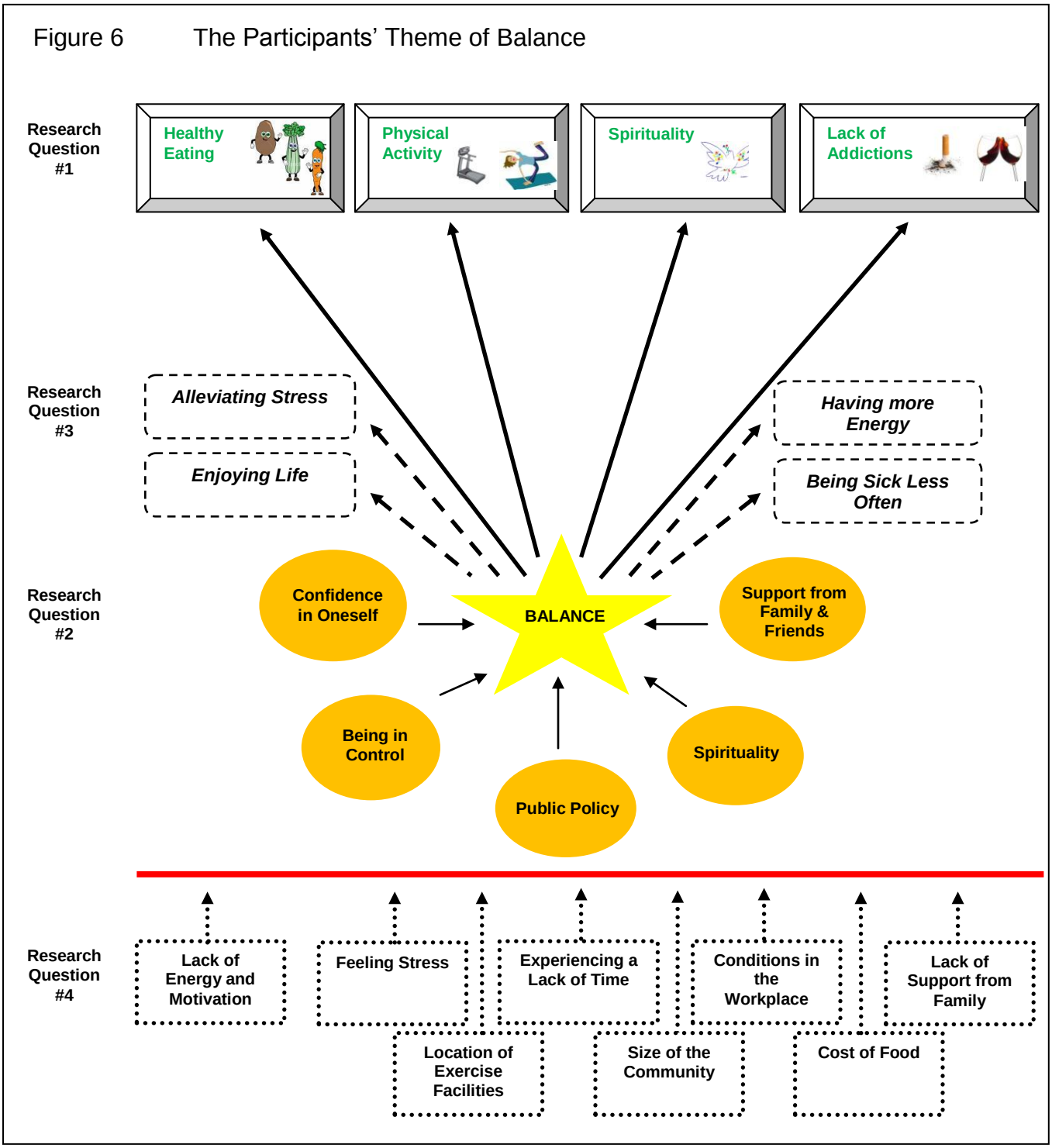


Unique barriers identified by the participants of this study, that I did not encounter in the current literature, were the cost of alternative medications (natural), access to medical services, access to information, and the lack of space and privacy. These barriers map into the policy level of influence in Stokols' social ecological model. Policy involves setting local and provincial laws, as well as creating procedures and laws which protect the health of the community (Stokols, 1996; Stokols et al., 2003). Prince Edward Island is a very small province and the barriers that participants are

experiencing at the policy level may be due to the lack of financial resources in a less densely populated, smaller geographical area (Canadian Institutes of Health Research, 2006; Centre for Rural and Northern Health Research, 2002; World Health Organization, 2009b).

Figure 6 offers a pictorial view of the theme of balance throughout the four research questions. The theme of balance continued to weave throughout the issue of the barriers to living a healthy lifestyle. A balanced life would provide participants with energy, motivation, and reduced stress. Matuska and Christiansen (2008) found that the more people are able to balance their lifestyle, the greater the reduction in stress, improved health, and greater life satisfaction. Their mind, body, and spirit would be in equilibrium. If individuals were balanced, there may be less issue with time management and work conditions. Gregory and Milner (2009) found that offering employee's flex-hours assisted in balancing the individuals' work-life environment. A balanced life requires that individuals maintain regular physical activity (Health Canada, 2011c). The location of the exercise facilities is key. Public policy may need to be put into place that stipulates the necessity for recreational facilities in every community (Fitzgerald & Spaccarotella, 2009). If policy was created and implemented to add a recreational facility to every community, then the small size of an individual's community may no longer be a barrier or may increase rates of physical activity levels. Support from family and friends are vital to a balanced life. Current literature found that women required social support from family or friends in order to change and maintain healthy existing and an exercise routine (Eyler et al., 1998; Fitzgerald & Spaccarotella, 2009; Fleury & Lee, 2006). Affordable food is also required for a balanced lifestyle. Policy would have to implemented that affected food pricing (Fitzgerald & Spaccarotella, 2009).

Figure 6 The Participants' Theme of Balance



In conclusion, the perceptions women have regarding the barriers to living a healthy life may be summed up as having a lack of energy and motivation, feeling stress, a lack of time, conditions in the workplace, location of exercise facilities, the size of community, the cost of food, and the lack of support from family and friends. Considering the large number of barriers experienced by the participants, this is further evidence for the need for a multi-dimensional approach in providing information for citizens in order to promote healthy living and modify health behaviour.

Limitations

The research was conducted with women in the jurisdiction of Prince Edward Island. I have provided demographic information about these participants, as well as information about Prince Edward Island, in general. I have also written about the study findings in detail. In this study, as in qualitative studies in general, it is the responsibility of the reader to determine if the findings apply to his or her context.

My initial strategy for inviting participation in the study was through advertising in the paper and in the grocery stores. I had to adopt a second strategy, snowball sampling (Patton, 2002), to find sufficient numbers of participants. Snowball sampling is a recognized form of sampling, although I would have preferred to find people to participate through my advertising strategy. It may have resulted in more variability in the participants' demographic information.

The demographic information that I gathered would have been enhanced if I had been able to question participants about their personal health conditions, such as height and weight, their healthy eating practices, as well as their physical activity practices. This may have allowed me to draw additional conclusions related to the participant's

ability to translate knowledge or information into practice. However, determining these factors was not a part of my study design.

Implications of What I Learned

There are a number of implications of the findings in this study. Specifically, there are implications for teaching strategies, policy development and understanding, and health promotion efforts.

First, this study has implications for teaching strategies. Traditional teaching strategies about healthy living have had limited success in translating the knowledge the women learned into the practice of living a healthy life (Gottschall-Pass et al., 2007; Pepin et al., 2004). Education which focuses more on the socio-cultural and physical environmental influences may have more success in changing women's health behaviour towards eating a healthier diet and increasing levels of physical activity (Glanz et al., 2008; Stokols, 1996; Stokols et al., 2003). Therefore, there may be a need to teach holistically; teach to the whole person (mind, body, spirit), in order to take into account the socio-cultural and physical environmental influences on an individual.

Second, this study also has implications for policy design and understanding; specifically, improving understanding in how the environmental and social policies may affect healthy eating and physical activity. Substantial population wide improvements in nutrition, physical activity, and obesity may not be possible without changes in the environment and public policy (Hill, Sallis & Peters, 2004). Further investigation into defining these specific environmental and social policies requires additional study.

Third, implications exist for health promotion in the areas of spirituality. In terms of health promotion and prevention, it is important to realize that the women in this study feel that they are spiritual and their spirituality is part of what it means for them to

live a healthy lifestyle, so future health promotion models need to take a holistic approach in order to help individuals change their behaviour.

Fourth, it is vital to be aware that Prince Edward Island women in this study place importance on drinking in moderation. When considering health promotion and prevention regarding healthy living, it may be essential to include education surrounding alcoholism or assistance to those who have been personally affected or abused by alcoholics. Therefore, the Prince Edward Island Department of Health and Wellness should consider including resources from Health PEI's Addiction Services when creating health promotion and prevention educational materials.

Future Research

This study revealed the importance of balance to the female participants. Balancing women's physical, mental, and spiritual dimensions is vital and, in order to create this balance, we must learn about what influences them in order to change their health behaviour. Current education strategies have been able to help women learn the importance of healthy living, but have been ineffective teaching women how to translate their knowledge into action (Gottschall-Pass et al., 2007; Pepin et al., 2004). Adopting a more holistic approach may indeed facilitate change. If education strategies incorporated Stokols' social ecological model as a framework, and ensured that socio-cultural, physical, economic and personal environmental influences were involved in any initiatives, there is a possibility that this more holistic approach may facilitate changes in health behaviours (Glanz et al., 2008; Stokols, 1996; Stokols et al., 2003).

Further research investigating the connections of healthy eating and physical activity behaviours with a social ecological framework is required due to the complexity of the social ecological model (Stokols, 1992, 1996). There has been limited research

conducted that focuses on how the broader levels of influence operate and how the variables interact across the levels of influence (Glanz et al., 2008; Stokols, 1996; Stokols et al., 2003).

Additional research is also required in the area of healthy living. The majority of the current literature explored individual aspects of healthy living, such as healthy eating, physical activity or smoking, for instance. I was unsuccessful in locating literature that tied all of the areas of healthy living together in one study. Healthy living is a complex area and finding solutions to problems surrounding it may be more successful if it was not studied in silos.

Conclusion

Designing a descriptive, qualitative research study on women's perceptions of healthy living allowed me to explore the meaning and influences on healthy living, as well as the benefits and barriers of achieving a healthy lifestyle. This research study has shown that women have multiple perceptions, and these multiple perceptions must be included in teaching strategies in order for them to be effective.

In order for the education and teaching strategies to be effective, they must address the learner as a whole, including physical, mental, and spiritual aspects of the individual. Education in the area of healthy living needs to take into account all aspects of influence on an individual. Stokols' social ecological model takes into account individual, interpersonal, organizational, community environment, and policy environmental influences. The interaction of these levels of influence is what determines the individuals' behaviour (Stokols, 1996; Stokols et al., 2003). As other researchers suggest (Glanz et al., 2008), I believe that focusing teaching strategies on the connections of individuals with their physical and socio-cultural environments is critical.

This focus may provide a way forward for supporting individuals as they attempt to modify their behaviours to live a healthy life.

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Appendix A - Invitation to Participate in Research

Appendix B - Participant Information Letter

PARTICIPANT INFORMATION LETTER

You have been invited to participate in a research project entitled "The Environmental Influences to Healthy Living" conducted by Irene Gillis under the supervision of Debbie MacLellan in the Department of Family and Nutritional Sciences and Martha Gabriel in the Faculty of Education at the University of Prince Edward Island (UPRINCE EDWARD ISLAND). This study is being conducted as part of my Master's of Education degree at UPRINCE EDWARD ISLAND.

The purpose of this study is to explore what healthy living means to eight adult women, aged 40-65, from PRINCE EDWARD ISLAND. This study will examine the factors that help or hinder women from living healthy lives.

You are being asked to partake in a one hour interview to discuss factors that help or hinder women from living healthy lives. You are also being asked to complete a short 5 minute demographic survey. The interviews and survey will take place in the boardroom at the Town Hall in Montague.

Your participation in the research project will pose no harm to you. Your participation in this research project is entirely voluntary. You may stop your participation in the research project at any time, without penalty or prejudice. All information collected in the course of this project will remain confidential and anonymous, and you will not be able to be identified from any of your responses. Pseudonyms will be used in this study. The audio-recording of your responses will be destroyed immediately after it has been transcribed.

The interview transcripts will be converted to electronic format and password protected. The electronic data will reside on both a USB stick and a CD ROM. When the data is not being used for this study, it will be stored in a fire proof lock box in my home in Belfast, Prince Edward Island. Note that a final copy of this data will also be stored in a locked location by both of my supervisor's at the university. No data will be stored on computer hard drives.

Only Irene Gillis, Debbie MacLellan and Martha Gabriel will have access to the data resulting from this research project. All data resulting from the research project will be retained for a period of five years after the completion of the project, after which time it will be destroyed.

A copy of the transcript created from the interview will be mailed to you for your review, along with a transcript release form, in order to obtain your approval to use your information. A self-addressed envelope will be included so that you may mail back an edited copy to me for changes. If changes are requested, a final copy will be mailed back to you.

If you have any questions or concerns about this research project, please contact me at:

Irene Gillis
igillis@uPrince Edward Island.ca
902-394-0558

Or you may consult with:

Debbie MacLellan	or	Martha Gabriel
Department of Family and Nutritional Sciences		Faculty of Education
902-566-0521		902-566-0503

This research project has been approved by the UPRINCE EDWARD ISLAND Research Ethics Board. Any concerns about the ethical aspects of your involvement in this research project may be directed to Lynn MacPhee at (902) 620-5104 or email lmacphee@uPrince Edward Island.ca

Appendix C - Demographic Survey

1. The highest grade or level of education I have completed is: **(Check only one)**

__ Less than high school

__ High school graduate

__ Some post-secondary

__ Completed trades/college certificate or diploma

__ Some university

__ Completed university degree

2. Who do you live with? **(Check all that apply)**

__ Live alone

__ Live with spouse/partner

__ Live with children under 18 years of age

__ Live with children 18 years of age or older

__ Live with other relatives

__ Live with other non-relatives

3. My total household income from all sources is: **(Check only one)**

__ Less than $15,000

__ $15,000 - $19,999

__ $20,000 - $29,999

__ $30,000 - $39,999

__ $40,000 - $49,999

__ $50,000 - $59,999

__ $60,000 - $79,999

__ $80,000 or more

4. The size of the community I live in is approximately: **(Check only one)**

__ Population under 500

__ Population of 500 – 999

__ Population of 1,000 – 1,499

__ Population of 1,500 – 1,999

__ Population of 2,000 – 2,499

__ Population of 2,500 – 2,999

__ Population of 3,000 – 4,999

__ Population of 5,000 – 9,999

__ Population of 10,000 or above

5. The following services are available in my community: **(Check all that apply)**

__ Health care providers (i.e. physician's office)

__ Youth workers

__ Long term care facilities (i.e. Senior's Residence)

__ Parks or recreational/fitness facilities

__ General or convenience store

__ Grocery store (i.e. Sobey's or the SuperStore)

__ Other:

Thank you for your participation!

Appendix D - Informed Consent Form

INFORMED CONSENT FORM

I consent to participating in research exploring what healthy living means to adult women.

I understand that my participation involves taking part in a one hour interview discussing factors that help or hinder women from living healthy lives. I also understand that I will complete a short demographic survey. The interview will take place in the boardroom at the Town Hall in Montague

I have read and understood the material about this study in the Information Letter, and understand that:

1. My participation in the study is entirely voluntary;
2. I may discontinue my participation at any time without any adverse consequence;
3. My responses will be kept confidential and anonymous;
4. Once all data have been submitted and identifiers removed, I will no longer have the opportunity to request that my data be removed from the study;
5. I give permission to use my quotations in the study;
6. I have the freedom not to answer any question included in the research; and
7. I may have a copy of the signed and dated consent form to keep.

This research is being conducted by Irene Gillis for her Master's of Education thesis under the supervision of Debbie MacLellan and Martha Gabriel. Any questions or concerns about this study can be directed to:

Debbie MacLellan	or	Martha Gabriel
Department of Family and Nutritional Sciences		Faculty of Education
902-566-0521		902-566-0503

This research project has been approved by the UPRINCE EDWARD ISLAND Research Ethics Board. Any concerns about the ethical aspects of your involvement in this research project may be directed to Lynn MacPhee at (902) 620-5104 or email lmacphee@uPrince Edward Island.ca

Participant's name (please print): _____ Date: _____

Participant's signature: _____

Researchers Signature: _____ Date: _____

Appendix E - Interview Guide

To Begin:

I would like to speak with you today about what is involved in living a healthy lifestyle. There is no right or wrong answers.

Questions:

1. Can you tell me what healthy living means to you?
   PROBE:
   a. What does it mean to be healthy?
   b. What kind of life do you believe you have to live to be a healthy person?

2. What do you think are the benefits of living a healthy life?
3. What makes it difficult to live a healthy life?
4. What makes it easy to live a healthy life?
5. Is there anything or anybody in your community that you believe affect your ability to have a healthy lifestyle?
   PROBE:
   a. time, money, family, community, friends, media
6. In general, compared to other people your age, would you say your health is:
   a. Excellent
   b. Very good
   c. Good
   d. Fair
   e. Poor

Wrap Up:

Thank you very much for participating in this interview for my Graduate research study for my Master's degree. Your response was very insightful and will be quite helpful.

Give conclusion - Summarize the findings that were presented during the hour. If you have anything to add at a later time, here is my contact information (give phone number and email address).

To Complete:

I would appreciate it if you could complete this short demographic survey. It provides me with some background information about who my participants are for my thesis. Just as a reminder, I will make sure that you cannot be identified in my thesis.

Appendix F - Transcript Release Form

Faculty of Education
University of Prince Edward Island

Environmental Influences on Healthy Living: Individual Interview

Transcript Release Form

I, _____ , have reviewed the complete transcript of my individual interview in this study and acknowledge that the transcript accurately reflects what I said in my personal interview with Irene Gillis. I hereby authorize the release of this transcript to Irene Gillis to be used in the manner described in the information letter and consent form. I have received a copy of this form for my own records.

_____ _____

Participant Date

_____ _____

Irene Gillis Date

I am interested in receiving a copy of the summary results of this study.

My mailing address is:

My email address is: